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Arab music theory in the modern period

Marcus, Scott Lloyd, Ph.D.

University of California, Los Angeles, 1989

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UNIVERSITY OF CALIFORNIA

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ARAB MUSIC THEORY IN THE MODERN PERIOD

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Music

by

Scott Lloyd Marcus

1989

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1989

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To my parents, for their love and support

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1989	review of Stephen Slawek's *Sitar Technique in Nibaddh Forms* in *Ethnomusicology*. Vol.33 (1):167-169.
1989	"The Interface Between Theory and Practice: The Case of Intonation in Arab Music," read at the annual meeting of the Southern California Chapter of the Society for Ethnomusicology.
in press	"The Rise of a Folk Music Genre: *Birahā*" in *Popular Culture and Daily Life in a North Indian City: New Approaches to South Asian Social History, 1800-1980.* ed. S. Freitag. University of California Press.
in press	"The Periodization of Modern Arab Music Theory: Continuity and Change in the Definition of the *Maqāmāt*," in *Pacific Review of Ethnomusicology*.
in press	"The Cassette Industry and Religious Music in India," read at a Social Science Research Council-sponsored conference called "New Media and Religious Change in South Asia." Accepted for publication by the conference organizers.

ABSTRACT OF THE DISSERTATION

Arab Music Theory in the Modern Period

by

Scott Lloyd Marcus
Doctor of Philosophy in Music
University of California, Los Angeles, 1989
Professor A. Jihad Racy, Co-chair
Professor Nazir A. Jairazbhoy, Co-chair

The dissertation is a critical review of modern Arab modal theory as presented in written sources, as taught in present-day Cairo, and as conceptualized by contemporary performers. The temporal focus of the study, the "modern period," extends roughly from the mid-eighteenth century to the present day. The geographic focus is the eastern Mediterranean region ranging from Egypt to Syria and Lebanon.

The first chapter introduces the modern period giving special attention to the changing position of music and music theory in Arab culture. It also introduces the main Arabic-language sources. The remainder of the dissertation is divided into four parts dealing with notes, tetrachords, modes, and modulation, respectively. Part one considers the notes as they are conceptualized in the indigenous system of Arabic/Persian note names, discusses the introduction of

Western solfege and Western notation into Middle Eastern music culture, and analyzes concepts of tuning and intonation held by modern-period theorists and present-day performers. Part Two discusses melodic intervals and modern tetrachordal theory. Part Three analyzes a number of important issues concerning the musical modes (the maqāmāt, s. maqām) including their number and classification. The essential elements that contribute to the definition of the individual modes are discussed in turn in a multisectioned chapter ten; e.g., tonic, ambitus, starting notes, etc. Part Four examines the role of and the rules governing modulation in contemporary practice. Within each chapter, discussions are organized chronologically, beginning with concepts that existed in the late-eighteenth, early-nineteenth centuries and ending with those that exist today. A concluding chapter views aspects of music theory from a cross-cultural perspective.

While the quarter-tone scale has provided an important element of continuity throughout the modern period, it is found that the concept of mode has changed drastically over the same period. This and other changes in the music theory occurred in response to a variety of social, cultural, and musical forces. In view of these changes, the modern period is best divided into three subperiods (early, middle, and present-day).

PREFACE

The modern period has been a time of tremendous change in Middle Eastern culture and music. This work addresses the question, "What has happened to the music theory during this period?" From the earliest stages of this study it became apparent that the theory of the modern period is characterized by change. The study is thus based on the understanding that a culture's music theory is a dynamic and multifaceted entity, one that is susceptible to change as a result of influences from a variety of different sources, be they musical, social, economic, political, or philosophical. The aim is to identify the various elements of Arab modal theory, ascertain patterns of continuity and change that have occurred in modern theoretical thinking, and seek reasons for aspects of both continuity and change.

Focusing on how theorists, performers, and music educators have conceptualized Arab music during the modern period, the study divides the modal theory into four broad parts: notes, tetrachords, modes, and modulation. The exploration of these four parts, one after the other, is seen as an organic progression: notes are organized into tetrachords, tetrachords are joined together to form modes, and modes exist in a state of constant interaction through the process of modulation. By adopting a chronological presentation of indigenous theoretical concepts, this study seeks to introduce the reader to the main issues of modern modal theory and to explore the immediate roots of the contemporary theory. At each stage, the diverse approaches and opinions found in the sources are noted, for, as will be seen, consensus and diversity are both important aspects of Arab music theory.

My interest in this topic dates from 1978 when, as a student at UCLA, I took a series of classes on the music of the Near East, taught by A. Jihad Racy. At the same time I began to learn the 'ūd from Professor Racy and played in his Near East performance ensemble. After studying modern standard Arabic, the language of the theoretical sources, I went to Egypt in 1982-83 for further study, funded by the American Research Center in Egypt. This was the first of three periods of study in Egypt, the others being in 1984 and 1987. My interest in Arab music was heightened by my earlier study of North Indian classical music, first at Wesleyan University, then in Banaras, a city in northern India, and later with Z.M. Dagar and Professor Nazir A. Jairazbhoy in the U.S.

The indigenous theoretical works surveyed (the earliest dating from c.1840) are from Egypt, Lebanon, and Syria. In addition to Arabic-language sources, the study is also based on European-language works, theory lessons from individuals who teach theory at Cairo's main music institutes, interviews with theorists, performers, and music teachers, conducted in the U.S. and Egypt, music lessons (on the 'ūd and nāy) also in the U.S. and Egypt, and my own observations as a student and performer of Arab music. Translations from French and Arabic are my own.

A comment should be made on the Arabic-language sources, many of which are not readily available in either the U.S. or Egypt. Most of the sources were obtained in Cairo, at the institutes of music, at the national library, at occasional book fairs, or from the private collection of Aḥmad Shafīq Abū 'Awf. Others works were obtained from American libraries and from A. Jihad Racy's private collection. In all, I deal with over fifty Arabic works. There are still a small number of works which I have not succeeded as yet in obtaining, most noteworthy being a group of treatises from the late-nineteenth and early-twentieth centuries (see Rouanet 1922:2681-82 and D'Erlanger 1949:404-407). I was able, however, to obtain copies of a number of significant works from these years so that I feel sufficiently apprised of the main issues current at that time.

The introductory chapter of this work establishes a broad social-cultural perspective by introducing the modern period, including the time frame and some of the socio-cultural forces that have characterized the period. Special attention is given to the changing position of music and music theory in Arab culture, for many of the changes that took place in the music theory occurred in conjunction with larger cultural changes. This chapter also introduces the main Arabic-language sources for the present study in terms of three general schools of modern Arab music theory.

Part One of the dissertation focuses on different issues concerning the notes used in Arab music and consists of three chapters (II, III, and IV). Chapter II, on the Arabic/Persian system of note names, has four sections. The first section (II.A) is a discussion of the earliest evidence of the twenty-four tone scale. The second section (II.B) introduces the scale itself. Inherent in the twenty-four tone scale is a three-tier classification of the pitches, the result of the early theorists' perception that the notes are not of equal importance. The seven notes per octave of the fundamental scale occupy the first tier. Another seven notes per octave, called *ʿarabāt* or *anṣāf*, occupy the second position, while the remaining ten notes per octave are relegated to a third category called *nīmāt* and *tīkāt*. These three categories are introduced one after the other following the manner in which this material is presented in the indigenous Arabic literature. The third section (II.C) addresses the question, "Are all the twenty-four notes actually used in practice?" The last section (II.D) explores the idea that the twenty-four tone scale extends over a two-octave ambitus.

In Chapter III, the introduction of Western solfege and

Western staff notation into Arab music is discussed. The Western systems of note names and representational symbols were wholeheartedly adopted in the twentieth century despite aspects of conflict with the indigenous system of Arabic/ Persian names and also with the tradition of aural music transmission.

Chapter IV, divided into two main sections, addresses the issue of the exact intonation of the pitches as conceptualized, first, by theorists and then, by musicians. The first of the two sections (IV.A) is itself divided into four parts: After briefly mentioning the most prominent of the pre-modern theories of intonation (A.1), the history of the modern equal-tempered quarter-tone scale is presented (A.2). Next, opposition to equal-temperament among both Syrians and Egyptians is discussed (A.3). Lastly, the rationale behind the new twenty-four-tone scale is considered (A.4).

In the second section of this chapter (IV.B), comments from musicians on the placement of the various notes are analyzed. This results in the identification of several "mini-systems" of variant intonation that coexist with the prevailing theory of equal temperament. At the same time, a number of notes beyond the standard twenty-four per octave are identified.

Part Two consists of Chapters V and VI. Chapter V discusses the melodic intervals that are recognized in modern

Arab theory. Chapter VI addresses such points as the revival of tetrachordal theory in the twentieth century, the number of tetrachords admitted in theory and practice, and the joining together of two or more tetrachords to form larger modal scales.

Part Three analyzes a number of important issues concerning the musical modes (the maqāmāt, s. maqām) including the various terms for "mode" (Chapter VII), the number of modes (Chapter VIII), and their classification (Chapter IX). Chapter X attempts a systematic and comprehensive analysis of the various elements which enter into the definition of the individual maqamat in the modern period. In all, I have isolated sixteen different elements; they are discussed in separate sections of Chapter X. [i] I do not mean to imply, here, that these elements have all been recognized throughout the modern period. On the contrary, some are mentioned in only one or two of the period's three sub-periods. Starting notes and specific paths for performance, for example, are important issues in the first and second but not the third subperiod; tetrachords are discussed in the second and third but not the first; non-duplication at the octave is a prominent aspect of the second but not the first or third subperiods. Such shifts are a major part of the changes that have occurred in the concept of mode during the period.

Of the sixteen elements I have identified, a few are commonly ignored by Arab theorists but are recognized by

Arab musicians or Western scholars. Variant intonation is an example of an issue largely ignored by theorists but mentioned by musicians. Melodic motives have been an important subject for Western scholars but they are not generally mentioned by either Arab theorists or musicians. By taking note of which issues are recognized and which are ignored, we can get a picture of the scope of modern Arab theory in each of its three subperiods and in the period as a whole. Because of the length of Chapter X, notes appear after each of the sixteen sections rather than at the end of the chapter.

Part Four examines the role of modulation in contemporary performance (XI.A), reviews a number of concepts which establish various two-fold classifications of the modulations which occur in practice (XI.B), and discusses rules for modulation that are mentioned in a few of the written sources. Finally, I offer my own attempt at classifying the modulations which occur in modern-day Arab music (XI.D).

Chapter XII offers concluding remarks on the findings of the present study and then addresses a number of broader issues such as the difference between descriptive, prescriptive, and speculative approaches to music theory. In this latter discussion, evidence from a variety of music cultures is considered. Many of the forces which have affected modern Arab theory, such as westernization and modernization appear to challenge and influence cultures throughout the world. Thus, it is hoped that the findings of the present work will be relevant to studies of other music cultures, particularly by furthering our understanding of how music theories develop and respond to the dynamics of change in the modern world.

NOTE

1. Previous attempts at isolating the elements that contribute to the definition of the individual maqamat have been significantly more limited in scope. In all but one case, the writer has confined him/herself to discussing a single time period, i.e., the period in which he/she worked. For example, Idelsohn wrote in the first part of the twentieth century (see 1914:12-13); Berner studied in Cairo in 1931-33 (see 1937:42 and 57); D'Erlanger studied Arab music while based in Tunisia from 1910 to 1932 (see 1949:99-110); al-Faruqi seems to base her analysis on D'Erlanger's presentation (1974:90-105 and 1981:170). Elsner's study (1973) is unique in that it attempts to document changes in the maqam concept over a period of time, specifically, in Egypt, over the twentieth century.

TERMINOLOGY AND TRANSLITERATION

Some words of explanation are necessary about the terminology used both in Arab music theory and in the present study. A number of scholars have remarked about the fluid nature of Arabic music terminology (see Shiloah 1981:20, for example). Terms used for one concept are often also used to name another concept. The terms for melodic mode, note, and melody illustrate this point. *Maqām*, *naghamah*, and *laḥn* can all be used to mean 'mode'; *naghamah* and, in some cases, *maqām* can also be used for 'note'; *naghamah* and *laḥn* can also both mean 'melody.' In this study I try to record the existence of such variant uses. For the purposes of my own text I have chosen to use *maqām* (pl. *maqāmāt*) to mean melodic mode. This is in keeping with the present trend in scholarly circles in Cairo.

I refer to the music under study as "Arab music." This is a translation of "al-mūsīqá al-‘Arabiyyah," a term that has gained popularity over the last fifty years. (Scholars have also referred to this music as "Arabic" and "Arabian." The former is herein reserved for references to the Arabic language.) I also follow a long tradition of referring to the region as "the Middle East" while recognizing that many use "the Near East" and that "West Asia" is devoid of the biases inherent in the other two terms.

When transliterating passages from Arabic sources, I follow the system of the Library of Congress Cataloging Service (Bulletin 91, September 1970) with one exception. Feminine relative-adjective (nisbah) forms are transliterated with a double "y"; e.g., mūsīqiyyah and ʿArabiyyah.

In addition, please note the following points: I do not include the definite article "al-" in the Arabic names for notes or melodic modes; thus "maqam Rast" rather than "maqam al-Rast." When referring to two or more of any Arabic noun I use the plural form of that noun even when this goes against standard Arabic grammar. For example, when discussing two melodic modes I use "maqamat" even though Arabic requires the dual form, "maqāmān" or "maqāmayn". And when discussing the twenty-four quartertones I use twenty-four ārbāʿ (pl. of rubʿ) even though Arabic requires the singular noun for quantities greater than nine (thus, twenty-four rubʿ in proper Arabic).

When referring to pitches in tables and in the text the following conventions are observed. Notes in the various octaves are indicated as follows: The central octave of Arab music (i.e., the notes Rast to Awj, commonly transcribed beginning with the low C of the treble clef) is represented by capital letters: C, D, E, etc. The higher octave is represented by small letters: c, d, e, etc. The lower octave is indicated with doubled capital letters: CC, DD, EE, etc. (see Harvard Dictionary of Music 1969:679).

In addition, because of the limitations of my computer program, the Arab half-flat, commonly designated by a flat sign with a slash through its stem (ƀ), is represented as "-b-". The half-sharp, commonly designated by the symbol "≠", is represented as "=/=". The flat and sharp are indicated by "b" and "#," respectively. In accordance with these points, the two-octave fundamental scale is represented as follows:

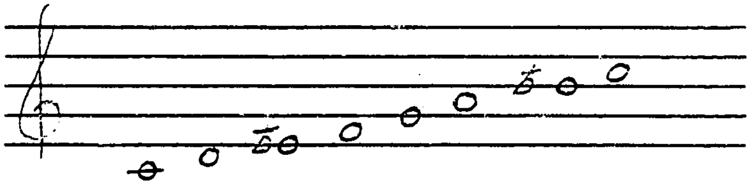
GG AA BB-b-	C D E-b- F G A B-b-	c d e-b- f g
i.e., the notes Yakah, `Ushayran, and `Iraq.	i.e., the notes from Rast to Awj	i.e., the notes Kirdan and above

Finally, the Arabic letters hamzah and `ayn are transliterated as (') and (`) respectively; footnotes are indicated with brackets (eg., [1]); the word maqām appears without diacritical markings; names of authors and musicians and titles of source material appear with diacritical markings only in Chapter I and in "References"; and maqam and note names are given diacritical markings only in Appendices 2 and 9.

CHAPTER I: THE MODERN PERIOD

A. A DATE FOR THE BEGINNING OF THE MODERN PERIOD

The modern period of Arab music theory is commonly said to begin with the re-conceptualization of the Arab scale in terms of quarter steps (Farmer 1936:754; Shiloah 1981:33). Arab music is based on a fundamental scale of seven notes per octave. The third and seventh degrees of this scale are neither natural or flat in the Western sense: in a scale built on C, the third, a variety of E, occurs between E natural and E flat, and the seventh, a variety of B, occurs between B natural and B flat. Today these notes are called "half-flat" or occasionally "neutral" notes. The unique position of these notes is indicated in transcription by a flat sign with a slash across the stem.



At the beginning of the modern period, the intervals between C-D, F-G, and G-A were defined as containing four quarter steps; the other intervals in the fundamental scale were said to contain three quarter steps. Adding up these quarter steps, Arab theorists determined that there are twenty-four per octave. At the start of the period these twenty-four steps were conceptualized and each was named using a system of Arabic/Persian note names. The note C, for example, is called Rast; the Arab variety of E is called Sikah; etc. While many aspects of the music theory and practice have changed during the modern period, the quarter-tone system has remained and thus provides one of the strongest points of continuity throughout the period. The fundamental scale, itself, predates the modern period. It is the re-conceptualization in terms of quarter steps which was new and which marked the beginning of the modern period of Arab music theory.

The quarter-tone system is thought to have been formulated sometime in the 1700s. The earliest reference to its existence is from the 1770s (Laborde 1780:436-439). The present study thus assumes the modern period to begin roughly in the mid-eighteenth century and uses Laborde's work as the earliest source for modern Arab music theory. This is done with the understanding that further research may reveal earlier sources which mention the quarter-tone scale and thus lead to a more precise dating of the period's starting point. [1]

The modern period is not a monolithic entity, however, [2] and one could arrive at different starting dates depending on which aspect or aspects of the music theory one is considering. For example, while the quarter-tone scale seems to have appeared in the eighteenth century, modern tetrachordal theory did not begin until the 1930s. The starting date would also be different for different regions of the area: it seems, for example, that the quarter-tone scale appeared in Syria before it was accepted in Egypt (see below).

B. A SOCIO-CULTURAL OVERVIEW WITH EMPHASIS ON THE PLACE OF MUSIC AND MUSIC THEORY IN ARAB SOCIETY

The modern period of Arab music theory largely coincides with an era defined by historians as the modern era, usually dated from the arrival of Napoleon's troops in Egypt (1798), and characterized by great change in virtually every aspect of Middle Eastern culture. Modern Arab music theory was not isolated from the developments that occurred in Arab culture as a whole: many shifts in theoretical thinking were in direct response to changes that took place in Arab society. [3]

1. The Position of Music and Music Theory at the Beginning of the Modern Period

The position of music and music theory in Arab society at the beginning of the modern period is discernable from comments in five early works: Russell and Russell [1756] 1794 (based on years of residence in Aleppo, Syria); Villoteau [1812-13] 1823 and 1826 (based on fieldwork conducted in

Egypt over three and a half years from 1798 to 1801); Lane 1836 (based on two periods of residence in Egypt, 1825-28 and 1833-35) [4]; Shihāb al-Dīn (Cairo) 1840; and Mashāqah (Damascus) c.1840. From two of the works dealing with Egypt it is clear that while music flourished in this country during these early years it was held in low regard. Lane, for example, wrote ([1836] 1981:351), "The Egyptians in general are excessively fond of music; and yet they regard the study of this fascinating art ... as unworthy to employ any portion of the time of a man of sense ..." Villoteau's observations confirm this lowly position and point out one of the consequences: music theory was virtually ignored as an independent discipline.

> Music ... is regarded in this country as a frivolous matter, unworthy of occupying the spare time of any good Muslim. Those who practice it, debased in public opinion, are cast in the contemptible class of jugglers and jokers. Further, among the Egyptians there are only people entirely deprived of resources, without education, and without hope of obtaining the least consideration in society who decide to embrace the profession of musician; and the knowledge of those in music does not extend beyond the circle of the routine of ordinary practice... (Villoteau 1826:7)

Elsewhere, Villoteau comments that Egyptians of that period had "little habit ... of reflecting and reasoning" about their music (ibid.:113). The musicians themselves "never considered reflecting on what they did" (ibid.:114). And, "In a word, the notions that they have about their music are neither methodical nor well thought out; they [the notions] are merely ... the result of routine practice ..." (ibid.:123). [5] In keeping with this overall situation, Villoteau could not find anyone in Egypt who understood the medieval Arabic treatises on music (ibid.:7-8).

This is not to say, however, that there was no music theory in late-eighteenth, early-nineteenth century Egypt. There was a performers' theory which was oral rather than written. Musicians did know names of the seven fundamental scale degrees (Villoteau 1926:124-25); they knew and named at least twenty melodic modes (ibid.:128-130); and they conceptualized about modal transposition and modulation (ibid.:125-27). [6]

From a work by two Western medical doctors we get a similar understanding of the position of music in Syria. Russell and Russell note that people from Aleppo "are fond of music" (1794 v.1:150) but add, "Of the [fine] arts, [poetry] alone may be called reputable in Syria. Superstition has banished painting; and music, degraded by fashion to a mercenary profession, is rather tolerated than encouraged" (ibid. v.2:111).

The Lebanese historian and music theorist, Mashāqah, tells us that music in Syria was in a state of decadence ([c.1840] 1899:149; 1913:69; see Ronzevalle 1913:3) but then gives a different picture of the position of music theory at this time, for while Egyptians seem to have ignored music theory as an independent discipline, Mashāqah tells of animated theoretical discussions in Damascus in the 1820s (see Chapter II). He also mentions having read "many books" on the contemporary Arab music, books which he complains gave only rudimentary descriptions of the Arab quarter-tone scale. (Unfortunately, Mashāqah does not name these books or their authors; see Chapter II). [7]

2. The Position of Music and Music Theory Begins to Change

In both Egypt and Syria the position of music began to change in the first half of the nineteenth century as the region began a long process of westernization and modernization. In the following pages I briefly describe some of the relevant aspects of this westernization and modernization and then turn to how the position of music and music theory was affected by these developments.

a. Westernization and Modernization of Arab Society

One of the most significant changes that occurred in the Middle East beginning in the late-eighteenth, early-nineteenth centuries was a shift in how Arab leaders and intellectuals perceived Middle Eastern culture in relationship to European culture. For centuries they had felt the East to be superior to the West. [8] Following the Industrial Revolution and the Age of the Enlightenment in the West there was a shift in the relative positions of the two regions. The new reality was dramatically manifested by Napoleon's conquest of Egypt in 1798. As contact with Europe grew (especially during and after Napoleon's conquest), the perception developed that the West was more advanced not only in military and economic spheres but also in cultural and social realms. Many in the Middle East began to look to the West in order to learn what they perceived to be the essential elements of the West's newfound dominance. A period of modernization along Western lines began in the early years of the nineteenth century and has continued up to the present day.

Muḥammad `Alī, ruler of Egypt from 1805 to 1848, is considered one of the first great modernizers. He supervised an ambitious program of military, industrial and cultural development with the help of European advisors. Military and technical schools were opened, the first public schools for children were founded, and the first printing presses and newspapers were established (the former in Cairo in 1822). Many students and government delegations were sent to Europe to study the modern sciences and to learn about European culture firsthand. [9] Among those who went to Paris for an education was Muḥammad `Alī's grandson, Ismā`īl, who later ruled Egypt from 1863-1879. While in Europe, he

> ... partook of the social and cultural life and insisted upon creating a similar society in Egypt. Hardly any facet escaped his attention. His improvements in the cities and towns brought residential quarters, squares, and parks along

> with water service, gas supplies, and street lighting. Societies were organized for archaeology, music, and poetry, for the construction of libraries (the Khedivial Library in 1870) and museums (the Egyptian museum in 1863) for the advancement of Egyptology, and in 1875 the Khedivial Geographical Society for African exploration. In 1868 Ismāʿīl opened a comedy theater in Cairo and brought European companies to perform theatricals such as he had seen in Paris. The next year the Cairo Opera House was opened with a performance of Rigoletto followed by the premiere of Aida in December 18[71]. At the same time two theaters were built in Alexandria. Newspapers were encouraged and the famous daily Al-Ahrām began in 1876. (Fisher 1979:292)

For many Egyptians, including Ismā`īl and the later writer Taha Husayn (b.1889), the Europeanization of the Middle East became such a pressing goal that they came to view Egypt as an integral part of Europe (Fischer 1979:289-90; Hourani 1970:329-30; Racy 1977:30). [10]

In Syria and Lebanon contact with modern Europe occurred initially among the Christian population.

> In [this region] the leading role in revitalizing Arab intellectualism was first played by Western educators. Although Jesuits had arrived in the seventeenth century to teach Maronite and Catholic communities, little rejuvenation of Arab thought occurred until 1820, when American Presbyterian missionaries landed in Beirut. The latter organized schools almost immediately. The Catholics now increased their energies to compete with the American Protestants, and Ibrahim [who together with his father, Muhammad 'Ali, ruled Syria from 1831 to 1840] furthered the educational drive by establishing many elementary schools for boys on the model of those in Egypt. Girls' schools were also opened. In 1834 Americans set up a printing press in Beirut. Soon a training college for teachers was founded in Lebanon. In

> 1866 the Syrian Protestant College of Beirut opened its doors. Later, as the American University, it played an important role in training young people (Muslim and Christian alike) from every corner of the Arab world. Almost simultaneously, Catholic missionaries, largely from France, settled in Syria in great numbers, and schools spread from Beirut to Damascus, Aleppo, and many other towns. In 1875 the University of St. Joseph in Beirut opened; it would educate many outstanding leaders of Syrian national and cultural life. (Fisher 1979:369)

Accompanying these developments was the growth of new socio-economic classes. In Egypt, a "tiny indigenous bourgeoisie" was greatly expanded as was the urban working class (Marsot 1977:6). By the turn of the century, political events and the forces of education and westernization joined to produce "a new society of native Egyptians who were affluent and well educated..." (ibid.:41).

Growing nationalist movements brought about a number of other changes in Arab society including the emancipation of women in Egypt, better general education, and industrialization (Marsot 1977:197ff.). For example, in Egypt in 1925, "a law was passed making elementary education compulsory in an effort to wipe out illitteracy, ... which was recognized as a barrier to the establishment of truly representative government" (ibid.:201). Later, secondary education was also made compulsory. All these factors contributed to building a new and modern society in the region, fashioned in significant ways along Western lines.

The perception that Europe represented a higher stage of military, economic, and cultural development carried over into the realm of music culture. From the early years of the modern period many in the Middle East came to believe that European music represents a "more advanced stage of musical evolution" than indigenous Middle Eastern traditions (el-Shawan 1985:147). One of the earliest manifestations of this belief occurred in Egypt in the early nineteenth century when "Muḥammad 'Alī founded five schools of Western military music as part of his vast program for the modernization of Egypt" (el-Shawan ibid.:143). These schools, opened from 1824 to 1834, were staffed by European musicans who taught Western band instruments and elements of Western music theory and practice including Western notation and Western scalar theories. The admiration for Western music played an important role in changing long-held attitudes about music as a whole.

> From the 1850s to the 1950s the demand for Western music instruction and performance [in Egypt] came from both the large communities of Europeans ... and Western-educated Egyptians who regarded Western music as a symbol of 'progress' and their involvement in it as amateur musicians and listeners as one of the requisites for their admission to the upper echelons of Egyptian society. (el-Shawan 1985:143-144)

Racy (1977:62) adds that "in post-[World War I Egypt] the piano was viewed as a status symbol and thus became an essential item in middle-class homes." Proper upbringing for the daughters of these families included learning French and the piano (ibid.). This was such a popular trend that in 1923, 3232 pianos were imported from Europe and sold in a single Cairo store (Berque 1972, cited in Racy ibid.:63).

Perhaps the greatest "symbol of westernization in the Islamic East" (Racy 1976:28) was the Cairo Opera House built by the Khedive Ismail to mark the opening of the Suez canal in 1869. The Opera House presented yearly seasons of Italian opera until its destruction by fire in 1971 (el-Shawan ibid.:144). [11]

b. Arab Music, a New Respectability

The position of Arab music and music theory also changed during the period when the above-discussed developments were taking place. Shihāb al-Dīn, writing in Cairo c.1840, presents 298 pages of contemporary song texts (1892:22ff.) [12], from which we can deduce that Arab music performance was flourishing in the first decades of the nineteenth century. It is not clear, however, to what extent the vocal music that Shihāb al-Dīn documents represents a renaissance of Arab music in the early nineteenth century, or to what extent it was but a continuation of earlier eighteenth-century practice. Whatever the case, Shihāb al-Dīn's work can itself be seen as a manifestation of the intellectual revival that began in the first half of the nineteenth century. [13]

There is also evidence that Muḥammad 'Alī supported Arab music to some extent for Farmer tells us (1954:895) that "the greatest Egyptian musician of the [first half of the nineteenth century], Muḥammad al-Qabbānī, was attached to the court. Farmer adds that "... Sakīna, the famed female singer [mughanniyah], became the rage" during this period.

As for the state of music theory by mid-century, Shihāb al-Dīn's work gives us a mixed picture. For one, the theory that Shihāb al-Dīn presents contains a number of advancements upon the theoretical details described by Villoteau (Villoteau had conducted his fieldwork c.35 to 40 years earlier), but Shihāb al-Dīn gives only a brief and incomplete exposition, one which contains a number of inconsistencies and inaccuracies. At roughly the same time in Syria, Mashaqah was writing a treatise that defined the state of the art as far as theory was concerned. In comparison Shihāb al-Dīn's presentation suggests that Arab music theory in Egypt was still lagging behind the theory in Syria.

In the second half of the nineteenth century there is evidence of a major flowering of Arab music in Egypt. Aided by new levels of literacy, by the growing intellectual and national movements, by the enthusiastic attention which Western music had attracted, and by royal support, Arab music began to gain new respectability. The realization that European classical music was held in high regard in Europe also served to remove some of the stigma that surrounded music in Arab society. Racy comments that "the social image and economic conditions of a number of Cairo singers and instrumentalists improved considerably" at this time 1983a:166). Egyptian rulers, Ismā'īl (r.1863-1879) and Tawfīq (r.1879-1892), concerned with "promoting the country's overall cultural image, played an important role" by patronizing a number of Cairo musicians (ibid.).

New classes of people became involved not only in music practice but also in music theory:

> Many Egyptians began to look at music not only as a professional craft [part of a profession they had previously despised], but also as a liberal art. Musical amateurs were becoming conspicuous, especially among the learned well-to-do Egyptians ...
>
> The popular interest in music prompted the appearance of news reports on music and musicians in Cairo's newspapers... The scientific periodical al-Muqtaṭaf occasionally responded to readers inquiries about music theory, and sometimes discussed the maqāmāt or melodic modes (see al-Muqtaṭaf 1887:690).
>
> Musical books during this period played a comparable role. In 1897 al-Muqtaṭaf regretted that there were no books in Arabic for teaching music (European theory and notation), except those used by the Royal Military Bands and a booklet prepared by an American missionary ... (al-Muqtataf 1897:66). But about seven years later, an Egyptian writer mentioned that there was already a book ... for teaching the qānūn, another ... for teaching the nāy, and a third ... for teaching the 'ūd (al-Khula'i c.1904:56).
>
> (Racy 1983a:165-66)

Noting these changes, D'Erlanger wrote (1947:378) that music experienced a "rehabilitation among the intellectual classes to whom [a few cultural pioneers] revealed that this art is not only a 'distraction' (malhā) ... but also an intellectual discipline ..."

The new enthusiasm for Arab music was enhanced during this period by renewed contact with Turkish music. For example, Egyptian musicians including the singers/composers, ʿAbduh Ḥāmūlī, Shaykh Yūsuf al-Manyalāwī (1850-1911), and Muḥammad ʿUthmān traveled to Istanbul in the latter part of the nineteenth century (Racy 1983a:166; Kāmil 1975:94). Ismāʿīl also brought a group of Turkish musicians to Egypt (al-Khulaʿī 1904:142).

Inspired by the new intellectual climate and by the recent contact with Turkish music, a number of Egyptian composers began to use in a wider variety of melodic modes, including modes newly adopted from Turkish music. Among the composers in this group were ʿAbduh al-Ḥāmūlī (1843-1901), Muḥammad ʿUthmān (1845?-1900), Salāmah Ḥijāzī (1852-1917), Kāmil al-Khulaʿī (1881-1938), Ibrāhīm al-Qabbānī (1854-1927), Sayyid Darwīsh (1892-1923), Dāūd Ḥusnī (1871-1937), and Maḥmūd Ṣubḥ (1897-1941). New music genres were also adopted including the Turkish samāʿī (T. saz semaisi) and, to a lesser extent, the bashraf (T. peşrev); indigenous genres were also developed to new heights, especially the Arab dawr (a vocal genre). These developments, begun at the end of the nineteenth century, continued through the first two to three decades of the twentieth century, creating what might be considered an "academic" period of Cairo-based Arab music.

At the turn of the century there was also a flurry of scholarly activity: treatises were written by al-Safarjalānī

(1891) in Damascus, and by al-Jundī (1895), Muḥammad Dhākir Bey (two in c.1895, one in 1903), Amīn al-Dīk (1902), Darwīsh Maḥmūd (1902?), and al-Khula'ī (1904) in Cairo. [14] Much of this activity was stimulated by the publishing for the first time of two earlier works, e.g., the treatises by Shihāb al-Dīn (c.1840) and Mashāqah (c.1840). The former was finally published in Cairo in 1892, the latter in Beirut in 1899. al-Khula'ī (1904), for example, includes (without citation) numerous passages either verbatim or with minor alterations from both of these works.

Syria's Christian community played a significant part in this scholarship. In the first part of the nineteenth century their contributions included the works by Mashāqah, a Melkite Greek who later converted to Protestantism, and Eli Smith, an American Presbyterian missionary, who wrote a loose English translation (1847) of Mashāqah's treatise. [15] At the turn of the century, it was P.L. Ronzevalle, a Jesuit priest, who published Mashāqah's work, first with Arabic commentary (1899) and later with a French translation and commentary (1913). Both works were published in conjunction with the University of St. Joseph, Beirut. Collangettes, a professor of physics at this same university, contributed an important study which reviewed medieval Arabic treatises as well as modern works (1904). [16]

The growing interest in music among the new well-to-do literate classes (Racy 1983:173) lead to two new developments, namely, the establishment of the first schools for teaching Arab music and the first journals devoted to music. The first school in the Arab world is said to have been founded by Manṣūr 'Awwaḍ and Sāmī al-Shawwā in Cairo in 1906 (Kāmil 1975:122). In 1913 it was replaced by the Oriental Music Club (*Nādī al-Mūsīqá al-Sharqī*) (Kāmil, ibid. and p.26; see el-Shawan 1979:90). After a few years the Egyptian government became involved in the new movement: a new building was constructed and the Club was superseded by a government supported institute, called *The Oriental Music Institute* at its founding in 1929, then *The Royal Institute for Arab Music* from 1933, and finally *The Higher Institute for Arab Music* from 1952 (el-Shawan 1979:95 & 106). Today it is the main Arab music institute in Cairo.

In Beirut, a new music school established in 1910 led eventually to the Lebanese National Conservatory (Farmer 1954 v.8:257). In Damascus, music clubs and later institutes were founded from 1928 (ibid.; see also Ibn Dhurayl 1969:38). [17]

The first Arabic music journal was *Rawḍat al-Balābil* (The Garden of Nightingales), a monthly published in Cairo from 1920 to 1927. The editor and frequent contributor was Iskandar Shalfūn (d.1932), a Lebanese Christian from "the congregation of Saint-Joseph" (D'Erlanger 1947:378). [18] Maḥmūd al-Ḥifnī started another journal in Cairo in 1935 (published twice monthly) called simply *al-Mūsīqá* at first, and then *al-Majallah al-Mūsīqiyyah* or *La Revue Musicale* from

1936. These and other journals included articles on Western and Arab music--lessons, for example, on Western solfege and Western notation, on how to hold and play various Western and Arab musical instruments, and on individual melodic modes (Western major and minor as well as a number of Arab *maqāmāt*). Biographical sketches of important music figures, staff transcriptions of pieces of Arab music, and the programs of some newly established radio stations were also included.

The enthusiasm for building interest in Arab music was such that a new press devoted exclusively to the cause was founded in Alexandria in the late 1920s. Called the Edition Orientale de Musique (Ta'līf Sharqī li al-Mūsīqá), its publications included music transcriptions and a collection of articles by A. Hemsi (see Hemsi 1930).

In the twentieth century a number of other media were founded, thereby dramatically expanding opportunities for both performing and listening to music: the musical theater (begun in the second half of the nineteenth century; Racy 1983a:173), the record industry (the first commercial recordings date approximately from 1904; see Racy 1977), musical films (from 1932) and radio (from the 1920s; see el-Shawan 1979:93ff.), and the audio-cassette industries. Cairo became the main center for these new media causing artists from throughout the Middle East to flock to Cairo in order to build their careers in Arab music performance.

Stars such as Umm Kulthūm, Muḥammad ʽAbd al-Wahhāb, Farīd al-Aṭrash (from Lebanon), ʽAbd al-Ḥalīm Ḥāfiẓ, and Wardah (from Algeria) gained superstar status throughout the Middle East.

Another factor that aided the surge of interest in Arab music was feelings of national and Arab pride. For example, nationalist movements encouraged governments to support new music conservatories and brought segments of the population to the point where they were ready to study the indigenous music, something they had traditionally shunned as an inappropriate pastime. King Fuʼād of Egypt wanted his role in the establishment of the Cairo music institute to be clear to one and all: he had it named The Royal Institute for Arab Music (al-Maʽhad al-Malakī li al-Mūsīqá al-ʽArabiyyah). Similarly, the Beirut institute founded in 1924 was called the National Music Conservatory (al-Kūnsirfātwār al-Mūsīqī al-Waṭanī) (Farmer 1954 v.8:257).

With the growth of Arab nationalism many also began to use the name "Arab music" (al-mūsīqá al-ʽArabiyyah) whereas the music had, up to this point, always been referred to as "Eastern" or "Oriental" (al-mūsīqá al-Sharqiyyah) rather than "Arab." [19]

c. Western Influences on Arab Music and Music Theory

Despite the multi-faceted flowering described above, the overall situation was not all positive for the local traditions. A large precentage of the well-to-do classes were so taken with the idea of Western cultural superiority that they avoided their own musical heritage. The extent of this bias was quantified in 1932 when a survey revealed that there were more students and teachers of Western music in Egypt (Cairo?) at that time than there were of Arab music (2384 students of the former, 1789 of the latter; Kitāb al-Mu'tamar 1933:342, cited in Racy 1977:38). Even those involved with Arab music were not immune to feeling the preeminence of Western culture and more specifically the preeminence of Western musical culture. For many concerned with the continued vitality of Arab music the situation was considered to be of crisis proportions. Arab music was in peril; its very survival was in question. From numerous sources (Ronzevalle 1913; Hemsi 1930; Kitāb Mu'tamar 1933; etc.) we learn of animated discussions/debates on the methods necessary to bring about a major renaissance of Arab music.

In these discussions one point was commonly agreed upon. Accepting as fact the perception that Western music represented a more highly evolved form of cultural expression, they agreed that Arab music needed to adopt many of the features that contributed to Western music's more "advanced" state. We find this idea expressed as one of the main objectives of numerous music clubs, institutes, conferences, and publications from the 1920s to the present day. It also served as the one of the main goals of the Egyptian State

Radio, inaugurated in 1934, and of many Egyptian government cultural and educational policies over the same period (el-Shawan 1979:96ff.). For example, the main goals of the Institute of Oriental Music in Cairo were "the revival, preservation, and dissemination of [Arab music] and its '...organization on an artistic basis comparable to Western art music'" (ibid.:96, quoting from Kitāb Mu'tamar 1933:23).

Similarly, the 1959 and 1961-63 Cairo conferences were convened

> to research and study the reorganization of the rules of theory and practice upon which Arab music in Egypt is based so as to guarantee its development and adjustment to the modern renaissance of the country, seeking help in this from that which the West has brought to the foundation of Western music... (al-Ḥalqah al-Thāniyah 1964:7) [20]

One of the most spectacular manifestations of the perceived need for Western input was the Congress for Arab Music held in Cairo in 1932 (see Racy, "in press"). The Congress was called largely so that Arab music could benefit from the expertise of a number of the most renowned Western music scholars, including H.G. Farmer, Bela Bartok, Paul Hindemith, Von Hornbostel, Robert Lachmann, and Curt Sachs. Arab musicians and scholars associated with the Congress hoped that their Western counterparts would point out ways that Arab music could incorporate essential "scientific" aspects of Western music, thereby assuring the former's renewed vitality and, thus, its continued survival (ibid.).

Another remarkable example of Western input came in the person of Rodolphe D'Erlanger, a wealthy Frenchman who settled in Tunisia in 1910 and began extensive studies of Arab music, past and present. Aided by his Western background and biases, D'Erlanger compiled an Arabic-language report on the Arab modal system which, for some thirty years, was one of the most influential studies on the Arab modes (D'Erlanger 1933; accomplished with the collaboration of `Ali Darwish of Syria). D'Erlanger's study is based largely on Syrian practice but can be considered as providing accurate documentation of many aspects of the "academic" period of the Cairo-based performance practice (c.1890-1930) mentioned above.

By the 1920s and 30s the desire to incorporate aspects of Western music culture began to bring about changes in both the form, content, and contexts of Arab music and music theory. For example, the traditional performance ensemble, the takht, consisting of from three to five or more instrumentalists (especially players of the qānūn, `ūd, violin, nāy, and tambourine), began to give way to the large "orchestral" ensemble (the firqah)(see el-Shawan 1984:272ff.) containing a large violin section, two or three cellos, and a contrabass. In time, other Western instruments were added including the guitar, the accordion, the bongos, and the electric organ. The new ensemble, especially its large violin section, in time eroded the traditional Arab aesthetic of heterophony in favor of unisons and parellel octaves.

Arab modal theory was significantly affected. For example, the concept of scale gained new prominence in Arab modal theory and affected the concepts of tonic, octave, modal ambitus, and other elements which played a role in the definition of the individual melodic modes. In addition, new systems of modal classification were devised based on Western principles such as key signature.

Traditional patterns of teaching and learning also changed. New schools of music founded on Western models were now providing institutionalized training in music and music theory. Western solfege and staff notation became the media of transmission in these new institutes so that in time Arab music changed from an oral to a largely written tradition.

Arab music theory was also affected by a Western approach to scholarship which stimulated studies of medieval Arab theory by both Westerners and Arabs. Collangettes and J.P.N. Land were among the scholars who worked in the nineteenth century. In the first half of the twentieth century Rodolphe D'Erlanger and Maḥmūd al-Ḥifnī stand out because they helped introduce aspects of medieval Arab theory into the modern theory (most notably, tetrachordal analysis). al-Ḥifnī, an Egyptian (d.1973), received Western musicology training at the University of Berlin and completed his degree with studies on the medieval theorists, Ibn Sīnā and al-Kindī. D'Erlanger also introduced a new descriptive element to theoretical presentations of the individual maqamat. Using the new tetrachordal theory, he incorporated in his writings a description of the manner in which each mode was characteristically developed in performance. This new method was adopted by a number of Arab theorists from the 1930s to 1960s.

As a result of all the above-mentioned changes, Arab music and music theory was significantly modernized along Western lines. I refer to the new music theory which developed in the 1920s and 1930s as the "middle-period" theory.

3. The Popularization and Institutionalization of the Teaching of Arab Music and Music Theory

By the first decades of the twentieth century, Arab music had acquired new levels of respectability; it had become identified as a significant component of Arab culture and had attracted enough interest among the well-to-do literate classes so as warrant the establishment of music clubs, institutes, and journals. Soon, however, the position of music and music theory in Arab society began to change even more drastically when the Egyptian government mandated "the formal instruction of the rudiments of Arabic and Western music theory and performance ... in Egyptian public schools starting with the academic year 1931-32" (el-Shawan 1979:99 citing the Kitāb Mu'tamar 1933:370). [21] Far from being "a contemptible art" (Villoteau 1826:41), music and music theory were now considered to be essential aspects of a well-rounded general education. Muṣṭafá Riḍā, the director of the Institute of Oriental Music and then the Royal Institute for Arab Music until his death in 1950 (el-Shawan 1979:95) expressed the new understanding of the position of music in Arab society: "music is one of the most important manifestations of civilization among nations" (Kitāb Mu'tamar 1933:23, quoted in Racy, "in press").

The introduction of music and music theory into the mass education system necessitated a new type of music theory, a pedagogical theory which explained the existing music in a simplified, systematized, and standardized fashion. Prior to this development, music performance and music theory were concerns of the specialist (most commonly, two different kinds of specialists, i.e., one who played the music and the other who pondered questions of music theory). When the theory was oriented toward the specialist, aspects of complexity were not something to be avoided in theoretical expositions: one could expect the specialist to wade through complicated issues and reach necessary levels of understanding. But now with mass music education, previous levels of complexity were no longer acceptable.

The extent of the problem was immediately clear to the newly established music teachers. al-Ṣabbāgh, from Aleppo, complained that various aspects of theoretical complexity were causing confusion in the minds of his students (1950:35). A concerned teacher from Beirut adds that unnecessary complexities contribute to the "hesitation" and even the "avoidance" of his students to learn about Arab music. The complexities, he tells us, cause students to turn to the study of Western music because it "exceeds" Arab music in terms of "the ease [with which one can] learn about it and understand it ..." (al-Ḥilū [1961] 1972:74 & 76). Thus, when a number of Egypt's most renowned performers, theorists, and music educators gathered for two conferences in 1959 and 1961-63 (the *Ḥalqah...* and *al-Ḥalqah al-Thāniyah...*), they set as one of their main goals "the necessity to lower the large number of melodic modes (*maqāmāt*) to a number that would facilate their circulation and their teaching, and to explore ways for their simplification ..." (*al-Ḥalqah al-Thāniyah* 1964:11).

Beginning in the 1930s (and possibly earlier) we find a new music theory "simplified for the sake of the student." See, for example, al-Ḥifnī's *al-Mūsīqá al-Naẓariyyah* (Music Theory; [1938] c.1946:129). As Superintendent of Music in the Egyptian government's Ministry of Public Education, al-Hifni had the new public school teachers and students in mind when he wrote this work. Or see Ṣalāḥ al-Dīn's *Miftāḥ al-Alḥān al-'Arabiyyah* (The Key to Arab Melodies) about which the author writes, "... the mission of this book is the simplification of the rules of Arab music ..."

(1950:176).

The new theory which emerged was informed by its pedagogical orientation. Many of the levels of complexity in the earlier theory which resulted from attempts to describe practice were eliminated. There was, thus, a shift from a descriptive to a prescriptive theory. The new theory was also characterized by a pervasive use of Western solfege and staff notation since these were seen as essential tools for facilitating the teaching/learning process. I refer to the new theory which emerged as the "present-day" theory; it is the theory which is taught today in Cairo and other Arab cities.

Another consequence of the decision to include music within the mandatory public school curriculum was the founding in Egypt in 1935 of a school to train music teachers (al-Ma'had al-'Ālī lil-Tarbiyyah al-Mūsīqiyyah, i.e., The Higher Institute for Music Education; see el-Shawan 1979:100). [22] This school has become the main center in Egypt for theoretical studies of Arab and Western music, producing masters theses and doctoral dissertations which focus on a variety of subjects such as the history and development of particular musical instruments and music genres, studies of the contributions of prominent singers and composers, the role of improvisation in Arab music, the Arab melodic modes, etc. Most of the present-day generation of music theorists in Egypt are products of this school.

With the new curriculum and new music institutes came the need for new publications directed towards both students and teachers. Thus, over the last fifty years a large number of theory books, method books, and books of music transcriptions appeared, most expounding the new pedagogically-oriented theory.

With these books we notice a new trend: the authors of these works are all teachers at the various music institutes throughout the Middle East, be they in Cairo, Beirut, Aleppo, Damascus, or some smaller cities in the region. Contemporary theorists are no longer individual, often isolated scholars. Rather they are part of a class of educators trying to further the teaching of music and music theory in public institutions.

Over the last fifty years the role of these music institutes has grown so that it is now commonly acknowledged, especially in Cairo, that graduation from such an institute has become a minimum requirement for a career in Arab music, whether in performance or teaching (see, for example, el-Shawan 1979:96). In the field of music performance this is largely because of the high standards of music literacy that are required of a professional musician: today, live performances or commercial recordings of brand-new pieces are often done with only one or two rehearsals. This requires absolute competence in sightreading Western staff notation, a skill that is commonly acquired only at music institutes.

Over the last fifty years, as a greater and greater percentage of professional musicians and music teachers came to be products of the various music institutes, the new simplified, pedagogically-oriented theory spread so that it became, first, the predominant form of music theory and then, in time, the only "living" music theory. Today's musicians and music teachers, with virtually no exceptions, look back upon the theory that existed prior to the process of simplification with little or no comprehension. This is most surprising as there were still theorists writing about the pre-simplified theory as late as the 1960s (al-Ḥilū 1961 and Maḥfūẓ 1963-64).

This brings us to the present day. I would like to conclude this section with a brief assessment of the position of Arab music theory in the Middle East today. The present-day theory is not based on an analysis of previous generations' theoretical treatises. Works written prior to the recent process of simplification are not commonly read; when they are read they are not generally understood. Thus, for all intents and purposes, the only theory that exists today is the present-day theory.

Theoretical discussions and scholarship continue but are generally confined to music institutes. Those who graduate and go on to teach continue to be involved in theoretical issues. Those who go on to become performers soon forget many of the aspects of theory that they had to memorize in order to graduate. Many of the latter acknowledge it an occasional pastime that two or three musicians would try to remember some of the finer points of their theoretical training. They test each other, but, they readily concede, few remember many of the details.

This is not to say that theoretical scholarship is dead or even moribund. The newest developments in Arab music theory, namely the processes of simplification and standardization described briefly above, are all very recent developments. For example, a new classificatory system for the *maqāmāt* (the system of *faṣā'il*, s. *faṣīlah*; see Chapter IX), first introduced in the 1930s, had perhaps its most developed and elegant exposition in a work published in 1984 (by Suhayr ‘Abd al-‘Aẓīm Muḥammad, a teacher at the Cairo teachers' college, the Kulliyyat al-Tarbiyyah al-Mūsīqiyyah). One cannot foretell the next developments for Arab music and music theory, but we can all be assured that new developments will indeed take place.

As for music practice in the present day, the trend toward simplification is apparent in a number of ways. For one, the simplified concept of the individual maqam that is presented in the new theory came to affect the way musicians and composers rendered the maqamat in their performances and compositions (see Chapter X). The new theory, prescriptive in intent, became descriptive of practice as graduates of music institutes filled the ranks of Arab musicians and composers. On a less subtle level, there is now a tendency to use only a small number of melodic and rhythmic modes. There are, however, a few "academic" composers who continue to incorporate little used maqāmāt (many of which have been neglected since the first decades of the twentieth century). Also, in recognition of the passing of certain modes and music genres from the common repertoire, the Egyptian government has founded two music ensembles which perform older music, i.e., music dating as far back as the late-nineteenth century (see el-Shawan 1979:105 and 1984). [23] These modes and genres have become historical phenomena, considered worthy of preservation.

In conclusion, we have seen that the developments in music theory were driven on by a number of social, cultural, and political factors, many of which were outside the normal realm of musical and theoretical issues. The role of music and music theory within Arab society changed dramatically over the last c.200 years. A disreputable pastime at the beginning of the modern period, Arab music became an art form which was charged with positive cultural overtones on at least two levels. First, music was recognized as an "important manifestation of civilization," in a general sense. Second, and more specifically, Arab music was embraced for its Arab-ness. It is something of which Arabs should be proud, something that should be preserved, something that should be taught to children as part of their public school education. To the extent that the music was embraced because it was truly Arab, however, this element was subverted as the music became imbued with aspects of Western theory and practice, the result of efforts to emulate Western models and make the music more widespread among the general population.

C. THE MAIN SOURCES FOR MODERN ARAB MUSIC THEORY

Based on the content of their modal presentations, the main sources for modern Arab music theory can be divided into three schools or sub-periods. As these schools appear in roughly chronological order I have labeled them simply the "early," "middle," and "present-day" schools of modern Arab music theory. [24] This classification thus represents both a diachronic periodization (though with significant overlaps) and a developmental progression.

1. Sources For The Early-Period School

(see "timeline" at the end of this chapter)

Laborde

Laborde's Essai sur la Musique (Paris, 1780) is the earliest known work to mention the Arab quarter-tone scale. As such, it is here considered the earliest source for modern Arab music theory. [25] Laborde states that his information on "l'echelle de la Musique Arabe" "was communicated to us by the Baron de Tott, known for his talents in many fields, and for the profound knowledge that he has about all that concerns the Orient people" (p.436). Shaw (1976:251) gives a more detailed introduction: Hungarian by birth, Francois de Tott (1730-1793) fled during a revolt to France where he rose in the French army. In 1755 he was sent to Istanbul where he worked for "almost a decade ... as agent of the French embassy and inspector of French commercial establishments throughout the Levant." Later, "he came to the attention of Mustafa III [ruler of the Ottoman Empire, 1757-1174] who hired him as [an] advisor ... until 1776 when he returned to France ..." Note that Laborde's work appeared soon after de Tott's return to France.

Villoteau

Villoteau was part of the large expedition of scholars who accompanied Napolean to Egypt in 1798. Staying through to 1801, he was in charge of a study group whose task was to document the state of music in Egypt at that time. The results of the study appear in the multi-volume Description de l'Egypte ([1812-13] 1823 and 1826). Despite the fact that this work falls historically within the modern period, Villoteau did not find the quarter-tone scale to be in effect in Egypt at the time. Thus, the music culture he documents must be classified as pre-modern. Nevertheless, Villoteau's work is a major source for many aspects of Arab music and music theory at the beginning of the modern period.

Mashaqah

Mashāqah's al-Risālah al-Shihābiyyah fī al-Ṣinā'ah al-Mūsīqiyyah (The Shihābī Treatise on the Musical Art) contains the first thorough exposition of the quarter-tone scale. Subsequent presentations of this scale differ only in a small number of points, mostly with respect to terminology. Mashāqah's description of the individual melodic modes contains a number of primary characteristics which place this work firmly within the "early" school. For example, when describing the modes, one after another, Mashāqah gives a unique melodic phrase for each (see Appendix 4); such phrases are not found in the "middle" and "present-day" schools. In addition, Mashāqah does not apply either the concepts of scale or tetrachord in this section of his work; both of these concepts play central roles in later descriptions of the modes. [26]

It is not clear exactly when Mashāqah wrote this work. Rouanet (1922:2681) dates it as 1246 H., i.e., 1829-30 A.D. Farmer states (1938:160 and 1954 v.5:1012) that the oldest manuscript is dated 1840. Ronzevalle (1913:68) confirms the existence of this 1840 manuscript. In this study I will indicate the date as c.1840 with the understanding that it could have been written some ten years earlier. Eli Smith was the first to alert the West to this work with his free English translation in 1847. A version of the Arabic text was finally published in the Middle East (along with Arabic commentary) in 1899 by P.L. Ronzevalle. It was this 1899 publication which brought the work to the attention of al-Khula'i and other Middle Eastern theorists. Ronzevalle later published a critical edition of the Arabic text based on four available manuscript copies, along with a French translation and brief introductory remarks, in 1913.

Mashāqah, born in Lebanon in 1800, spent three years from 1817 in Damietta, northern Egypt, at the home of his paternal uncle. It was during this period that he began to study music (he makes it clear that he knew absolutely nothing about music up to this point), studying first the qānūn intensively with a master musician of that city, and then learning "the rest of the instruments" on his own ([c.1873] 1955:w and 65). In 1820 he moved to Damascus and continued his music studies under a scholar, a "master of many sciences," named Shaykh Muḥammad al-`Aṭṭār. Mashāqah wrote his treatise in Damascus and says that the modes he describes are those used in Syria. Mashāqah went on to become a physician, a historian, and an oft-quoted writer. He was appointed vice-consul of the U.S. in Damascus in 1859 (Shiloah 1979:278) and died in 1888. [27]

Shihab al-Din

Shihāb al-Dīn's Safīnat al-Mulk wa Nafīsat al-Fulk (The Royal Ship and the Sumptuous Boat) was written in Cairo at roughly the same time as Mashāqah's al-Risālah. The major portion of this work is a collection of song texts (with melodic and rhythmic modes indicated for each); however, this section is preceded by a brief (somewhat flawed?) introduction to the quarter-tone scale [28] and followed by discussions of various music-related topics (see Shiloah 1979:327-28 for a brief list of these topics). Clearly not as significant as Mashāqah's work in terms of modal theory, Shihāb al-Dīn's treatise is important for indicating the main melodic and rhythmic modes in use in Cairo at the time. The "flawed" presentation of the quarter-tone scale might be evidence of an early stage in the conceptualization of this scale.

The author, a musician, poet, and writer, born in Mecca in 1795, moved to Cairo where he worked on the first Arabic language newspaper, initially as an assistant and later as editor. He died in Cairo in 1857.

As for the exact dates of the work, Shiloah (1979:328) has found a manuscript dated 1840. The Egyptian music historian Maḥmūd Kāmil (1975:25) dates the work 1251 H., i.e., 1835-36. It seems that it was only with the appearance of a lithographed edition in Cairo in 1892 that the work came to the attention of Arab scholars.

2. Sources for the "Middle-Period" School

The main sources for "middle" period theory are the works of D'Erlanger, al-Ḥilū, Maḥfūẓ, and al-Shawwā. These authors define a "middle-period" school by including many levels of complexity which were not found in the early period. For example, their presentations of the individual maqamat incorporate the concepts of scale and tetrachord and also contain a description of the order in which each mode's constituent tetrachords should be performed. These theorists do not provide unique melodic phrases for each mode as Mashaqah had done.

The "middle" period school had its roots in two different regions in the late nineteenth to early twentieth centuries. The more prominent of the two was Syria, especially Aleppo, where Turkish-influenced Mevlevi musicians and others preserved a rich musical heritage. The second setting was Cairo during the "academic" period when composers began to explore a large number of newly discovered melodic modes (see p. 25 above).

D'Erlanger

The main theoretical source for this school is the 148-page Arabic-language report submitted by Rodolphe D'Erlanger to the 1932 Cairo Congress. This report, written with the collaboration of the Mevlevi *nāy* player, composer, and music educator, ʻAli Darwish from Aleppo, was published in both the 1933 and 1934 editions of the Congress proceedings, i.e., in the *Kitāb Mu'tamar* and the *Recueil*. [29] A revised and expanded French edition of this report was later published in 1949. While the French edition has had little impact on modern Arab music theory, the Arabic edition was extremely influential for a short time, leading to two works which copy D'Erlanger extensively (at times verbatim and at times with substantial editing).

D'Erlanger, who was born in France in 1872, moved to Tunisia in 1910 where he lived until his death in 1932 (see *New Grove* 1980 v.6:234 and Davis 1986:89-95). Besides his 1933/1934 Congress report, D'Erlanger worked with native informants and published four volumes of French translations of tenth- to sixteenth-century Arabic music treatises (1930, 1935, 1938, and 1939) and two volumes documenting contemporary theory and practice (1949 and 1959). The first of these latter two volumes is the expanded version of his Congress report.

al-Ḥilū and *Maḥfūẓ*

The two works which copy much of D'Erlanger's 1933 report are al-Hilu's *al-Mūsīqá al-Naẓariyyah* (Theoretical Music or Music Theory) published in Beirut in 1961 (reprinted in 1972), and Maḥfūẓ's *Kitāb Ta'līm al-Mūsīqá al-Sharqiyyah wa al-Gharbiyyah li-Dirāsat Ālat al-ʿŪd* (The Book of Teaching Eastern and Western Music for the Study of the Instrument the *ʿŪd*) v.3 and 4, published in Damascus in 1963 and 1964. al-Hilu taught music and music theory at the National Music Institute (al-Maʿhad al-Mūsīqī al-Waṭanī) in Beirut.

al-Shawwā

An important middle period source which was written entirely independent of D'Erlanger's work is Sāmī al-Shawwā's *al-Qawāʿid al-Fanniyyah fī al-Mūsīqá al-Sharqiyyah wa al-Gharbiyyah* (Artistic Rules in Eastern and Western music) written in Cairo in 1946. al-Shawwā, born in Aleppo in 1887, moved to Cairo in 1904 where he quickly became the most important Arab vioiinist of the first half of the twentieth century. He died c.1960.

3.a. The Roots of the Present-Day School

Certain essential features which typify the "present-day" school of modern Arab music theory are found in a few transitional works which appeared in the first decades of the twentieth century in Cairo. Of these works, I here mention four.

al-Khula'ī

al-Khula'ī (1881?-1938) was an important composer during the "academic" period in Cairo. His Kitāb al-Mūsīqā al-Sharqī (The Book of Eastern Music) was published in 1322 H., i.e., 1904-05. [30] al-Khula'ī relies heavily on the works of Mashāqah and Shihāb al-Dīn for portions of his chapter on modal theory, especially those portions in which he explains the quarter-tone scale. Prior to his writing this work, al-Khula'ī spent three years traveling with the renowned composer, Abū Khalīl al-Qabbānī, to Syria, Istanbul, and 'Irāq (Kāmil 1975:96).

Dhākir Bey

Dhākir Bey received his music training at one of Egypt's schools for Western military music (see p. 21 above). He wrote at least three works on music including Tuḥfat al-Maw'ūd fi Ta'līm al-'Ūd (The Promised Work on Teaching the 'Ūd) (1903). My references to this work are based on passages quoted by Fataḥ Allah (1971) as I have not myself seen this work.

Shalfūn and the Journal Rawḍat al-Balābil

Rawḍat al-Balābil, the first Arabic music journal (published from 1920 to 1927), contains a number of articles on Arab music theory. These were probably written by the editor, Iskandar Shalfūn. Shalfūn (d.1932), was a Lebanese Christian who moved to Cairo (see a brief biographical sketch in D'Erlanger 1949:378-380).

The Report of the Institute of Oriental Music

The 1932 Congress publications contains a report compiled by the Institute of Oriental Music, Cairo, which describes fifty-two maqamat used in Egypt at that time (Kitāb Mu'tamar 1933 and Recueil 1934:529-581). The Institute's report was apparently drawn up during the third and fifth meetings of the Congress' Committee on Mode, Rhythm, and Composition. Prominent Cairo musicians/composers including Muṣṭafá Riḍā, Dāūd Ḥusnī, and al-Khula'ī were present as were Aleppo-born Sāmī al-Shawwā and 'Alī Darwīsh. It seems that 'Alī Darwīsh was the one who prepared the final report (see Recueil 1934:143).

3.b. Sources for the "Present-Day" School

While the present-day school had its roots in the first years of the twentieth century, it was not until the 1930s and 1940s that most of the aspects which typify this school appear together. The result of movements towards simplification and standardization, the present-day theory is characterized by modes which are presented as single-octave scales composed of only two tetrachords (middle-period theory commonly presents the modes as containing two-octave scale and four or more tetrachords), by the absence of any statement on the manner of performing each mode (i.e., starting notes or a specific path for the melodic unfolding of the mode, etc.), and by the all-pervasive use of Western staff notation, now considered an integral part of Arab music.

al-Ḥifnī

One of the first of the present-day-school theorists was Maḥmūd al-Ḥifnī (1886-1973). Having finished his graduate degree at the University of Berlin (see above, p. 33) al-Ḥifnī returned to Egypt to play a major role in the 1932 Congress and the Egyptian Ministry of Public Education. He wrote his al-Mūsīqá al-Naẓariyyah (Music Theory) (first edition: Cairo, 1938; sixth edition, 1972) as a manual for teachers of music and music theory at three levels, roughly equivalent to our junior high, senior high, and college levels. The main concern throughout is the simple systematic unfolding of the various aspects of the music theory so as not to confuse or overburden the student (see, for example, c.1946:161).

Ṣalāḥ al-Dīn

Muḥammad Ṣalāḥ al-Dīn (1917-1965; dates in Kāmil 1975:127), Supervisor of Music at the Egyptian Ministry of Education (he succeeded al-Ḥifnī to this post?) and a teacher at various Cairo institutes of music, used his training in Western music to develop new ways of classifying the maqamat and systematizing other aspects of the present-day theory. He wrote a number of works, four of which are relevant to the present study. Of these, his Miftāḥ al-Alḥān al-ʿArabiyyah (The Key to Arab Melodies) (Cairo, [1946] 2nd printing, 1950), billed on its cover page as containing "new rules" and "simplified methods," is the most important as it contains the main ideas found in his other works. This book is considered an important work by many in Cairo today because it is perhaps the most comprehensive work available on the present-day modal theory. [31]

al-Ḥalqah

Ṣalāḥ al-Dīn was also an important figure in two music conferences held in Cairo in 1959 and 1961-63, the publications of which were called the *Ḥalqat Baḥth al-Mūsīqá fī al-Iqlīm al-Miṣrī* (The Study Circle on Music in Egypt) (1959) [32] and *al-Ḥalqah al-Thāniyah li-Baḥth al-Mūsīqá al-ʿArabiyyah* (The Second Circle for the Study of Arab Music) (1964), respectively. These conferences played a major role by affirming many of the theoretical stances that typify the present-day school's approach to music theory. Passing resolutions in favor of simplifying the definition of the individual modes, limiting their number, systematizing the method of modal analysis, etc., the conferees sought to establish a standardized and uniform theory.

al-Ṣabbāgh

Although the present-day school has been centered in Cairo, its basic principles have been embraced and advanced by a number of important educators/theorists in Lebanon, Syria, and elsewhere. Among them was the Syrian, Tawfīq al-Ṣabbāgh, a violinist, composer, theorist, and author of *al-Dalīl al-Mūsīqī al-ʿĀmm fī Aṭrab al-Anghām* (The General Music Manual on the Most Pleasing Modes) (1950) and *al-Anghām al-Sharqiyyah* (The Eastern Modes) (1954), the latter being a second edition of parts of the former publication. Although he worked independently from those in Cairo and thus developed a number of unique theories, he was guided in his treatment of the modes by the present-day school's emphasis on new ways to codify a simplified theory, primarily for the sake of the new breed of students. [33]

al-Ḥilū, again

Another writer who gives testimony to the presence of present-day-school theories outside of Egypt is Salīm al-Ḥilū. Although I have included his al-Mūsīqá al-Naẓariyyah among the middle-period works (see above), al-Ḥilū includes a number of statements showing that he is documenting a past tradition. For example, he comments on the fact that he gives two-octave scales and starting notes for most modes (middle-period features not found in the present-day theory) by saying that he does so "only in order to establish the system that was in use before the modern musical renaissance which ceased to use [these] restrictions and gave the freedom to the composer to proceed and to be versatile and to begin from any note he wants ..." (1972:94 n.1). The "modern musical renaissance" that he is referring to is what I have labeled the shift from the "middle-period" to the "present-day" period schools. [34]

`Arafah and `Alī, Fataḥ Allah and Kāmil

There are a large number of other present-day-school works written over the last forty to fifty years, many of which have been used as sources in this study. In these introductory remarks I would like to mention just four of these. The first two represent the large number of method books and books of music transcriptions that have appeared over this period, most of which are meant to be used as textbooks in various institutionalized settings. The music theory imparted in these works, often only in the introductory pages, is that of the present-day school, i.e., standardized and simplified. *Dirasat al-‘Ūd* (The Study of the *‘Ūd*) by ‘Abd al-Mun‘in ‘Arafah and Ṣafar ‘Alī first appeared in 1942 and has since gone through six editions or reprintings (the last in 1984). *al-Manhaj al-Ḥadīth fī Dirāsat al-‘Ūd* (The Modern Method for the Study of the *‘Ūd*) by Linda Fataḥ Allah and Maḥmūd Kāmil appeared in a second printing in 1982. Both, written by music teachers at one or more of Cairo's music institutes, are used extensively at these schools.

Muḥammad and Surūr

The last two present-day-school works I would like to mention serve to emphasize the fact that music theory is, today, an ongoing tradition, not lost or dying. New studies continue to appear, usually intended either as textbooks or as masters theses or doctoral dissertations. (In Cairo the latter would be for the Kulliyyat al-Tarbiyyah al-Mūsīqiyyah, i.e., the Faculty of Music Education, Halwan University.) Suhayr ‘Abd al-‘Aẓīm Muḥammad's *Ajandāt al-Mūsīqá al-‘Arabiyyah* (The Arab Music Notebook), published in Cairo in 1984, is an example of a textbook. The author teaches *‘ūd* at the above-mentioned university. Her work is praiseworthy for containing the latest statement of the present-day school's main system of maqam classification. An example of student works is Qadri Surur's doctoral dissertation *al-Maqām fī al-Mūsīqá al-`Arabiyyah Qadīman wa Ḥadīthan fī Miṣr* (Maqam in Ancient and Modern Arab Music in Egypt) (1986). Since graduating, Surur, a professional *nāy* player, has taught *nāy* and music theory at two Cairo music institutes.

Ibn Dhurayl, Allah Wayrdī, and the Syrian School of Intonational Theories

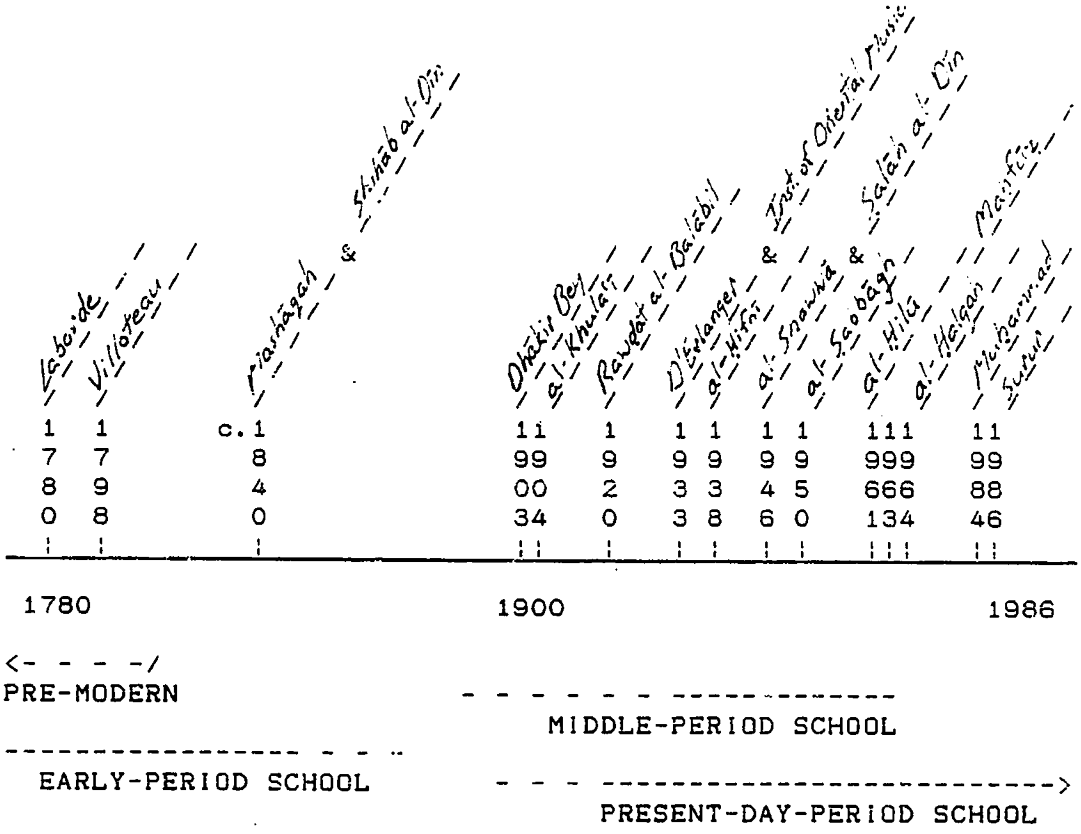
In addition to the three main schools of modern Arab music theory, there exists a group of twentieth-century Syrian theorists who define a separate Syrian school of intonational theory. The members of this school do not accept the quarter-tone scale, perhaps the most dominant feature of modern-period theory. Rather, they analyze the Arab scale in terms of fifty-three commas per octave, taking inspiration in this from both medieval Arab and contemporary Turkish music theory. Ibn Dhurayl's *al-Mūsīqá fī Sūriyyah* (Music in Syria) (Damascus, 1979) focuses on this school. Allah Wayrdī is author of *Falsafat al-Mūsīqá al-Sharqiyyah* (The Philosophy of Eastern Music) (1949). The Syrian school of comma-based intonation theories is discussed in Chapter IV.

Western Sources

In addition to the above sources, there are a large number of works written by Western scholars which played major roles in helping me formulate my understandings of modern Arab music theory. As is apparent in the preceding pages, the scholarship of A. Jihad Racy and Salwa el-Shawan contributed significantly to my perception of the changing position of music in Arab society. As for my understanding of the changes that occurred in Arab theory, the works of Jurgen Elsner and Harold Powers are noteworthy. Elsner, in his Der Begriff des maqām in Ägypten in neurer Zeit (Leipzeg, 1973), analyzes the emergence of a simplified scalar definition of the individual modes in Egypt. As his study was limited in scope to a small number of twentieth-century Egyptian sources he did not investigate the larger picture (including the three schools) that the present work uncovers. Insightful comments by Powers (1980 and elsewhere) concerning the concept of mode, tonic, classificatory systems, etc., aided my understanding of fundamental shifts in Arab modal theory. Jihad's music lessons and Nazir Jairazbhoy's analysis of alternative notes in Indian music (1971) led directly to my analysis of accidentals in Arab music. A large number of other Western works have been used in addition to those already cited. These works are referred to in the text; documentation can be found in the attached "References."

In concluding this introduction to the main sources for the present study and their division into three schools I would like to emphasize again that Arab music theory has never existed as a monolithic entity. Variations in form and content are a common feature, be they in the various written sources of a given school or in discussions with present-day theorists and musicians. In the latter case this is true even when talking with theorists and musicians who teach in the same schools or perform in the same ensembles. As Rouanet (1922:2767) has noted, "no one individual [among modern-period theorists] has [ever] been invested by his contemporaries with sufficient authority so that his decrees could carry the weight of law." The opportunity for musicians or theorists to develop their own individual understandings is an essential aspect of the Arab music ethos. In the present study I try to acknowledge those differences that have come to my attention. For the most part I do not consider these differences as negating the reality of the three schools that I describe. When a given work includes features from more than one school (al-Khulaʿī 1904, for example) I do not hesitate to say so.

A TIMELIME FOR THE THREE SCHOOLS OF MODERN ARAB MUSIC THEORY WITH SOME OF THE MAIN SOURCES FOR EACH SCHOOL



Notes:

Early-Period School: begins with the reconceptualization of the scale in terms of quarter steps; uses neither scale nor tetrachords when defining the individual modes; rather, gives a unique melodic phrase for each mode. The apparent lack of overlap between this and the other periods is probably due to a lack of documentation for the intervening period.

Middle-Period School: begins with D'Erlanger's work but describes late-19th-, early-20th-century performance practice; D'Erlanger's presentation uses a format found in the Rawdat al-Balābil in 1921. Middle-period theory is presented in works written as late as the 1960s. Definitions of the individual modes commonly include

Notes for Timeline (continued):

two-octave scales (many of which do not duplicate at the octave) and complex tetrachordal analyses (with many superimposed tetrachords); characteristic melodic movement for each mode is described by indicating a starting note and the order in which a mode's constitutent tetrachords should be performed.

Present-day-Period School: a few of its features are present in Dhākir Bey and Khula'ī (such as the absence of any description of the manner in which the modes are performed in practice and a tendency towards single-octave scales); however, the school does not receive full articulation until the 1930s-60s. Present-day theory is characterized by the definition of modes as single-octave scales containing only two tetrachords and by a lack of any description of melodic movement (no mention of starting notes, for example).

NOTES FOR CHAPTER I

1. In a 1940 work (p.4), Farmer defines the period as beginning shortly after the year 1700, thereby closely matching our understanding of the period's starting point. In a 1965 edition of the same work (p.x), Farmer writes that the period started shortly after the Muslim year 1100, corresponding to 1688 A.D. In a 1954 Grove's article, Farmer inexplicably gives an earlier date for the quarter-tone scale: "Egypt still holds to the quasi-quarter-tone system (ʿarabāt) introduced in the 16th century..." (vol.2:896). This latter date is not supported in Farmer's other writings (see, for example, 1936:754).

2. Farmer (1934:653; 1936:754; 1940:4; 1965:x) and Shiloah (1981:39) refer to Arab music and music theory of the modern period as "the Modern School." This nomenclature is avoided in the present work because it implies a level of uniformity not found in the modern period.

3. I wish to acknowledge two articles by A. Jihad Racy (1983a, and "in press") as playing essential roles in the formulation of this section.

4. See Villoteau 1826:2 and 205 and Lane [1836] 1981:9 where research/field work dates are mentioned.

5. When using ethnographic accounts, it is important to consider the background and field techniques of the ethnographer. This is especially true with early Westerners' accounts of aspects of Arab culture, for we cannot be sure of these individuals' interviewing techniques or the extent to which their own biases affected their findings. Of our three Western sources for this early period, Villoteau was most candid in expressing his initial dislike for Arab music (1826:114-116). Lane and the two Russells were clearly more sympathetic. Nevertheless, the uniformity of their comments in conjunction with the paucity of any contrary evidence lead us to accept much of what these Westerners have written about the position of music at the beginning of the modern period.

6. Villoteau offers one comment which suggests a greater degree of music scholarship than I have indicated. Without mentioning titles, authors, or dates, he writes, "It seems that the system of music of the Arabs has not maintained a constant form, and that the authors have not been in accord on the manner of its composition: some divide the octave ... [into] twenty-four different tones ...; others ... [into] eighteen notes; others ... [into] forty-eight notes" (1826:13-14). In earlier comments (ibid.:7-8), however, Villoteau suggests that these treatises were written by medieval rather than contemporary authors: "These very rare

treatises, which no one understands today in Egypt, ... it is probable even that these date from the time of the Caliphs."

7. One possible explanation for the theoretical activity in Syria at this time is the region's proximity to Turkey and its contacts with Turkish classical and religious musics, for these musics sustained a degree of theoretical activity during this period. Another factor might be the ongoing contacts between the region's Christian community and Europe. The spirit of Europe's Enlightenment and its scientific revolution was brought to Syrian lands in part by Christian missions, colleges, and monasteries (established as early as the sixteenth and seventeenth centuries) and in part by Syrian Christian and Jewish traders (see Hourani 1970:56). Hourani remarks that when, in the eighteenth century, trade passed from European merchants "into the hands of oriental Christians and Jews ... there grew up yet another group with direct knowledge of European life" (ibid.:56-57).

8. Indeed, there had been periods when the dominant intellectual center of the wider region (Europe and the Middle East) was understood to be in the Middle East: during the ninth and tenth centuries, for example, the Bayt al-Hikmah (the House of Wisdom) in Baghdad was recognized as the main center of learning in the larger region. Later in the sixteenth century Europeans were "awed" by the strength and efficiency of the Ottoman empire (Goldschmidt 1979:131).

9. About Muḥammad `Alī's program of military development Marsot writes,

> Modernizing an army inevitably led to developing and expanding a programme of education in terms of staff college, engineering corps, medical surgeons and veterinary surgeons. Schools were opened in Egypt and educational missions sent abroad to learn technology, not only in the field of military science but in other fields as well. Thus the army became the impetus for a wide programme of education of a new, secular nature. (1985:56)

10. "Perhaps the most apparent change during Ismail's rule was the Europeanization of modern Egypt. By 1880 more than 100,000 Europeans were living in Cairo and Alexandria. The leading citizenry of Egypt meanwhile was sending most of its sons to Europe to be educated" (Fisher 1979:289).

11. Although the popularity of Western music has declined significantly over the last 50 years (the vast majority of the pianos in Cairo now sit unplayed), the assumption that European music is more advanced than Arab music is still held by many in the Middle East today. el-Shawan, for example, writes that such thinking was prevalent among the men and

women in many Egyptian government councils and institutions after 1952 (1979:102).

12. These songs (*muwashshahāt*; s. *muwashshah*) are organized into thirty different suites (*waslat*; s. *waṣlah*). Each *waṣlah* contains from ten to fifteen *muwashshahāt*. Both melodic and rhythmic modes are indicated for each song. Such collections of poems/song texts are commonly called *dawāwīn* (s. *dīwān*) although Shihāb al-Dīn does not use this term.

See Racy 1977:55-61, 1983a:168, 1983c, and 1988:146 for descriptions of the *waṣlah* as it existed in the late-nineteenth and early-twentieth centuries.

13. It is noteworthy in this regard that Shihab al-Din was involved in this intellectual revival apart from his work in music: From 1828 he assisted the editor of the first Arabic newspaper in the Middle East, *The Egyptian Official Gazette* (*al-Waqā'i' al-Misriyyah*); he himself became the editor in 1836 (Shiloah 1979:327; Kamil 1975:25).

14. See Rouanet 1922:2681-82 and D'Erlanger 1949:404-405 for dates for a number of these treatises.

15. Smith and his wife also played an important role in the intellectual movement by establishing the first school "in Syria that had ever had a building constructed to serve as a school for girls; and, in a country where female education was almost universally neglected, the departure was startling and impressive, and was widely copied" (Antonius 1955:39-40; see also his footnote on p.36).

16. This is not meant to imply that the Syrian Muslim community took no part in the general revival. One of Mashāqah's main teachers, for example, was the shaykh Muḥammad al-'Aṭṭār (1764-1828)(see Mashāqah 1899:933; Shiloah 1979:64).

17. In keeping with the relative emancipation of women mentioned above as one of the results of the nationalist movement, women play major roles at these music institutes. Women serve as teachers, as department chairs, and even, quite frequently, as directors.

18. Shalfūn fits a general pattern: Hourani notes that it was Lebanese Christians who from 1860 founded newspapers and periodicals throughout the Middle East.

19. "al-Mūsīqá al-Sharqiyyah" still remains an important name for this music. For examples of the shift, note al-Khula'ī's 1904 *Kitāb al-Mūsīqá al-Sharqī* (Book of Oriental Music) and the 1913 Nādī al-Mūsīqá al-Sharqī (Oriental Music Club); then note the title of the 1961-63 conference, al-Ḥalqah ... li Baḥth al-Mūsīqá al-'Arabiyyah (The Conference ... for the Study of Arab Music), Kāmil's 1975 *Tadhawwaq al-Mūsīqá al-'Arabiyyah* (The Enjoyment of Arab Music), and Muhammad's 1984 *Ajandat al-Mūsīqá al-'Arabiyyah* (The Arab Music Notebook).

20. In most simple terms, Western music's "superiority" was commonly attributed to its application of "proper scientific principles/methods" (*al-usus al-'ilmiyyah al-ṣaḥīḥah* or *al-ṭarīq al-'ilmī al-salīm*) (see *al-Ḥalqah al-Thāniyah* 1964:8 and 9, numerous places in the *Kitāb Mu'tamar*, Shūrah 1984:47, etc.; see also Racy, "in press"). This phrase continues to be used in present-day conversations since it is widely believed that Arab music still lacks this "scientific" aspect.

21. Hemsi (1930:18-22) includes an interesting article that he wrote in May 1929 for an Alexandria newspaper (journal?) in which he reveals aspects of the debate which preceded the decision to mandate Arab music in the public school curriculum. From this article it is clear that the debate was conducted on a public level for a number of years before the decision was finally made.

22. This school is now part of Halwan University and has been renamed Kulliyyat al-Tarbiyyah al-Mūsīqiyyah (The Faculty of Music Education).

23. The two ensembles are the Arab Music Ensemble (Firqat al-Mūsīqá al-'Arabiyyah) and the Umm Kulthum Ensemble (Firqat Umm Kulthūm. The latter is often considered a student ensemble as it is based at the Higher Institute for Arab Music in Giza.

24. While I recognize the benefits of naming these schools in terms which typify their unique approaches, as Farmer has done with the Old Arabian, Greek Scholiast, and Systematist schools, I have not chosen to do so at this time.

25. See the comment above (p. 13) about the possibility of earlier sources.

26. Hāshim Bey , in his Majmū'at al-Maqāmāt (The Collection of Maqamat), written c.1362 in Istanbul, follows the same method for describing the individual modes. Although Hashim Bey writes about Turkish rather than Arab music, it is not inappropriate to consider his work a valuable source for understanding the early period of modern Arab music theory.

27. The spelling of Mashāqah's name is a subject of dispute. The controversy for most scholars centers on the name's first vowel. The Arabic language has three basic vowels, a, i, and u. When these vowels are long, they are indicated in the script. When they are short, they are not generally indicated, this being the case of the first vowel in Mashaqah. As it is an uncommon name, it seems that various writers have had to guess as to the first vowel (the second vowel, being long, is indicated). Thus some have written Mishāqah, others Mushāqah, and still others, Mashāqah. A few have even used an 'e' vowel, i.e., Meshāqah. Some transliteration systems ignore the final 'h' and thus Mishāqa, Mushāqa, and Mashāqa are also seen. The q is sometimes written as a k or a k̲, and the sh as š, giving other variants.

A. Jihad Racy, a native of Lebanon, suggests that the spelling should be Mashshāqah (personal communication, 6/86) as the word could refer to a woman who does the work of mashq or picking leaves. The silk industry was an important part of the Lebanese village economy (Mashāqah was Lebanese). Silk worms were usually fed mulberry leaves. Women who performed the task of picking mulberry leaves were called mashshāqah. Racy suggests that a member of the writer's family might have performed this function and thus received this name since many Arab families received names which refer to the profession of elder family members.

Afaf al-Sayyid-Marsot (personal communication, 11/24/87) adds that when she went to school at the American University in Cairo, one of the writer's descendants was a fellow student. This individual spelled her name Mishaka.

28. Shihāb al-Dīn describes the Arab general scale as containing twenty-eight notes per octave instead of the commonly accepted twenty-four per octave. This point is discussed again later in this chapter and also in Chapter II.

29. The 1933 publication is an Arabic edition; the 1934 publication is a French edition, with the exception that D'Erlanger's report is in Arabic in both. This is explained in the latter work (p.176) where it says that D'Erlanger, wanting to publish a French version of the report on his own, "authorized the Committee of the Congress to publish only the Arabic text ..."

30. Yūsuf Shawqī (1969:7) suggests that the title of al-Khulaʿī's work is Kitāb al-Mūsīqī al-Sharqī, i.e., "mūsīqī" rather than "mūsīqá." The title would then be translated, The Book of the Eastern Musician."

31. This is despite the fact that his system for classifying the maqamat is now generally ignored.

32. Shawqī (1969:16 and 226) dates both the first conference and its publication as 1957.

33. Farmer (1954 v.8:257) names two early works by al-Ṣabbāgh which I was not able to obtain, one being a 1932 theory book, the other a 1935 collection of music transcriptions. From Farmer's comments it seems clear that the 1950 and 1954 works contain later stages of al-Ṣabbāgh's theories.

34. According to al-Ḥilū, D'Erlanger's 1933 report presents the theory that existed prior to his "modern musical renaissance" (see al-Hilu 1972:92 n.1 and 113 n.1; D'Erlanger 1933:249).

CHAPTER II: THE NOTES AND THEIR ARABIC/PERSIAN NAMES

A. The Earliest Evidence of the Twenty-Four-Tone Scale

It is not clear exactly when the quarter-tone scale was first formulated; however, we know that it existed as early as the 1770s for it was recorded as "the Arab scale" in Laborde's Essai Sur La Musique (1780:436-439)(see p.43above). Laborde names the twenty-four notes over a single-octave range. In his presentation (reproduced in Appendix #1), he identifies seven fundamental notes plus an eighth, the octave of the first. He also subdivides the fundamental notes with `arabāt, nīmāt, and tīkāt (without using the first of these three terms)(see the Preface for an explanation of these terms) and compares the scale to the European twelve-tone equal-tempered scale. Except for deviant spellings, Laborde's presentation is exactly the same as many modern-day expositions of the twenty-four-tone scale. [1]

The first known Arabic source to confirm the existence of the twenty-four-tone scale is a treatise by Muḥammad al-`Aṭṭār, a resident of Damascus, entitled Rannat al-Awtār fī Jadāwil al-Afkār fī Fann al-Mūsīqār (The Sound of Strings [arranged] in Rubrics to Bring to Mind What Concerns the Musician's Art). [2] al-`Attar gives the Arabic/Persian note names over two octaves, thus expanding on the one-octave scale given by Laborde. An important feature of the two-octave Arab scale is that a majority of the notes are given independent names when they appear in each of the two octaves. (Prior to the modern period, notes were named only over a central single octave. Notes above or below this central octave did not have independent names.)

Shiloah does not date this treatise but notes that al-'Attar lived from 1764 to 1828. From the testimony of al-'Attar's student, Mikha'il Mashaqah, we can tentatively date this work as being from the 1820s:

> It was in the year 1236 H. [1820 A.D.] that I arrived in the city of Damascus, leaving my home in Dayr al-Qamar for various reasons, and I took the opportunity to study some of the arts under the shaykh Muhammad al-'Attar, famous in the rational sciences as well as the traditional sciences. Thus I was present during many arguments which occurred between him and 'Abdullah Afandi Muhurdar on the subject [of the placement of the frets in order to obtain the proper intonation for the twenty-four-tone scale in practice]. The Shaykh Muhammad continued to insist on his opinion until he [wrote] a treatise ... on the art of music... (Mashaqah [1840] 1899:933)

From this passage it is also clear that the twenty-four-tone scale was known among music scholars in Damascus in the 1820s. In addition, Mashaqah inadvertently reports that the quarter-tone system was also commonly acknowledged in the theory books of his time:

> I have studied many books on the art of music but have not found any which attempts to mention a way by which the student can attain a true understanding of the notes in practice, except what they say, namely that sound is divided from its tonic to its octave (min qarārihi ilá jawābihi) into twenty-four quarters and that these quarters are located within seven main notes, and that some of these, within them, have four quarters (arbā') and some three quarters, as has been mentioned at the beginning of this treatise." (ibid.)

Unfortunately, we know nothing of the books which Mashaqah refers to. (This passage is discussed further below.)

It is in the same work, Mashaqah's al-Risalah al-Shihabiyyah fi al-Sina'ah al-Musiqiyyah, that we find the first comprehensive presentation of the twenty-four-tone scale, including the three categories of notes and the intervals contained within. This has caused Farmer to single Mashaqah out as the "most important theorist" of the modern period (1936:754). Mashaqah's note names match those found in Laborde and al-'Attar in all but a few instances. Significantly, Mashaqah is perhaps the first of the Arabic writers to discuss the scale using the term "quarter" tone (rub', literally, "quarter"; pl. arbā').

While the above-mentioned works show that the twenty-four-tone scale was accepted in Syria in the eighteenth and early-nineteenth centuries, contemporary works from Egypt suggest that this scale was not adopted in Egypt until a later period. Villoteau, for example, did not find the twenty-four-tone scale in Egypt in 1798-1801. Rather, he found only the fundamental scale, each note of which was independently named only in a single central octave. Egyptian theory did not yet include the second and third categories of pitches, the *ʿarabāt* and the *nīmāt*/*tīkāt*. Villoteau writes,

> They distinguish well ... by their names the diverse degrees of the diatonic scale of sounds; they know also that there are other degrees interposed among the former, and they even make use of them rather frequently: but they do not know how to tell exactly what the nature and the size of the interval is which separates these degrees one from another; they designate the intervals smaller than the diatonic only by the names *a'fq* [*ʿafq*] and *baqeh* [*baqiyyah?*]... (1826:123)

ʿAfq and *baqiyyah* were terms in pre-modern Arab music theory but they are not used in the modern period (see Villoteau 1826:123 n.1 and 2; Laborde 1780:184ff.; al-Faruqi 1981:29-30).

In a treatise written some thirty-five years after Villoteau's fieldwork, Shihab al-Din shows that the Egyptians had taken an important step toward adopting the twenty-four-tone scale expounded by Laborde, al-ʿAttar, and Mashaqah. Specifically, Shihab al-Din indicates that Egyptians had accepted a scale with three types of pitches; i.e., fundamental notes, *ʿarabāt*, and *nīmāt*/*tīkāt* ([1840] 1892:13-15). However, Shihab al-Din's scale differs from that expounded in the Syrian-based works in a number of respects. Most significantly, his scale contains twenty-eight rather than twenty-four quarter-steps per octave. The four additional notes occur in the third, the nīmāt/tīkāt, category: Shihab al-Din says there are fourteen nīmāt and tīkāt; modern theory (including the works of al-'Attar and Mashaqah) recognizes only ten. Shihab al-Din does not explain his fourteen notes. Rather, he seems to admit that he does not understand this last category of pitches when he explains that he refrains from giving their names "for the sake of brevity," and observes that this is a difficult topic even for masters of the art of music (ibid.:16).

It is not until a number of turn-of-the-century works that we find evidence that Egypt had finally adopted the twenty-four-tone scale of Laborde, al-'Attar, and Mashaqah (with a few small differences in the note names). See, for example, al-Khula'i 1904:32. [3] al-Khula'i copies extensively from Shihab al-Din's work but takes care to correct the earlier writer concerning the number of notes per octave: "the octave (dīwān) is composed ... of twenty-four quarter tones only, not twenty-eight" (ibid.:30).

B. The Three Categories of Notes

B.1. The Seven Fundamental Notes

In modern Arab music theory, the notes are conceived as existing within three hierarchical categories. Indigenous theorists traditionally begin their presentations of this material by introducing the seven notes which are considered to be the principal tones of Arab music. The primacy of these notes was recognized in the earliest of modern-period sources: Mashaqah ([1840] 1899:218) designates them with the name abrāj (s. burj, "tower, castle, sign of the zodiac"), a term that is rarely used by later theorists. [4] Shihab al-Din ([1840] 1892:11) and al-Khula'i (1904:28), who copies Shihab al-Din, call them the "the fundamental (or principal) elements" (the usul).

Twentieth-century theorists continue to refer to these seven notes in terms which reflect their primary status: they are called "the fundamental notes" (naghamāt asāsiyyah) by al-Hifni (c.1946:121) and Farah (1974:72), "the fundamental steps" (al-darajāt al-asāsiyyah) by al-Hifni (ibid.:123) and 'Arafah (1967:15), and "the fundamental sounds" (aṣwāt asāsiyyah) by al-Hilu (1972:66). They are also called "the primary positions" (al-maqāmāt al-aṣliyyah) by al-Sabbagh (1950:34) and "the natural sounds" (al-aṣwāt al-ṭabī'iyyah) by al-Shawwa (1946:10).

The Names for the Seven Fundamental Notes, Past and Present

Except for variations in pronunciation and the existence of an alternative name for the seventh note in Egypt (discussed below), the seven pitches have had the same

Arabic/Persian names throughout the modern period: Rast (Persian), Dukah (P), Sikah (P), Jaharkah (P), Nawa (Arabic), Husayni (A), and Awj (A) (see Laborde 1780:437, Mashaqah [1840] 1899:632, and all subsequent works). These notes are equated with the Western pitches C, D, E-b-, F, G, A, and B-b-, respectively.

When introducing the fundamental notes, modern Arab theorists since Shihab al-Din have commonly begun by presenting an earlier set of note names. Prior to the modern period, the seven primary notes had ordinal names of Persian origin. These names were compound in nature. The first part of each name indicated the position of the given note among the seven, i.e., first, second, third, etc. The second part of each name was a consistent feature, the syllable "kāh", from the Persian "gāh" meaning "place" or "position." The names thus meant "first position", "second position", "third position", etc.

yak	=	one	>>	Yakah,	i.e.,	the	1st	position	
du	=	two	>>	Dukah,	i.e.,	"	2nd	"	
si	=	three	>>	Sikah,	i.e.,	"	3rd	"	
jahar	=	four	>>	Jaharkah,	i.e.,	"	4th	"	
banj	=	five	>>	Banjkah,	i.e.,	"	5th	"	
shash	=	six	>>	Shashkah,	i.e.,	"	6th	"	
haft	=	seven	>>	Haftkah,	i.e.,	"	7th	"	[5]

When explaining these Persian note names to their readers, Arab authors usually translate the Persian kāh (gāh) with the Arabic word, maqām, here meaning "place" or "position." The above names are then translated as al-maqām al-awwal, al-maqām al-thānī, al-maqām al-thālith, etc.; i.e., "the first position, the second position, the third position," etc. (see Shihab al-Din [1840] 1892:12; al-Khula'i 1904:28; al-Sabbagh 1950:34; al-Hifni c.1946:121ff.; al-Hilu 1972:66; Farah 1974:71).

By the beginning of the modern period, however, four of the seven ordinal note names had been replaced (this point is discussed in many works including those mentioned in the previous paragraph). The name Yakah was replaced by "Rast", a Persian word meaning "straightforward, pure, proper." [6] Banjkah was superseded by the Arabic word, "Nawa." Shashkah was replaced by the Arabic "Husayni" and Haftkah was replaced by the Arabic "Awj." Only the names "Dukah", "Sikah", and Jaharkah" were retained.

The names Rast, Nawa, Husayni, and Awj appear in the earliest modern-period sources, i.e., Laborde (1780:437), al-'Attar (in Shiloah 1979:65-66), and Mashaqah ([1840] 1899:632), all of which present the theory which was prevalent in the Levant. In Egypt, however, the note name, Haftkah, was originally replaced by the name 'Iraq rather than Awj. This is the name which Villoteau found in use in 1798-1801. Some thirty-five years later Shihab al-Din reports that this note was called "'Iraqi ['Iraq] at times and Awj at other times" ([1840] 1892:12). Eventually, Awj became the "official" name for this note among Egyptian theorists, 'Iraq being reserved for the note an octave below

Awj. Nevertheless, musicians in Egypt have continued to use both names. [7]

Yakah	>>>	Rast	C
		Dukah	D
		Sikah	E-b-
		Jaharkah	F
Banjkah	>>>	Nawa	G
Shashkah	>>>	Husayni	A
Haftkah	>>>	Awj (but also 'Iraq)	B-b-

Shihab al-Din remarks that Awj, meaning "highest point, pinnacle," appropriately describes this note's position as the highest of the seven fundamental notes (ibid.; this remark also appears in al-Khula'i 1904:28-29). [8]

Shiloah offers an explanation for the changes from the ordinal note names: "Here and there, ... names of *maqamat* such as [*rast*,] *'iraq* and *husayni*, became associated with degrees serving as their determined point of departure, and replaced the ordinal numerals as names for the scale degrees" (1981:37).

A transitional stage in the development of the modern-day terminology is found in an anonymous treatise discussed by Villoteau (1826:18). [9] In this work the author gives the note names Rast *or* Yakah, Dukah, Sikah, Jaharkah, Panjkah, Shashkah *or* Husayni, and Haftkah *or* Maqlub. According to this source, then, Rast and Husayni seem to have been the first of the non-ordinal names to appear. (Maqlub apparently fell from use: it is not mentioned in modern works.)

The Fundamental "Octave"/"Scale" and Maqam Rast

The seven fundamental notes form a group which is occasionally referred to as "the fundamental Arab collection" (al-dīwān al-aṣlī). Since dīwān, meaning "collection" or "council" is commonly translated as "octave," the concept, al-dīwān al-aṣlī, can be understood to mean "the fundamental octave." [10] al-Khula'i adds that additional octaves are but derivatives of this fundamental octave (1904:29).

In the twentieth century this idea is stated using the concept of scale, sullam in Arabic. (See Chapter X.B for a discussion of this term.) al-Hifni, for example, calls these notes al-sullam al-'Arabī, i.e., "the Arab scale" (c.1946:123; see also 'Iffat who adds an eighth note, the octave of the first). The 1932 Congress publication (Recueil 1934:83) refers to the seven fundamental notes as "l'echelle fondamentale ... de la Musique Arabe" (Recueil 1934:83 and 600). D'Erlanger similarly calls these seven notes plus the octave "la gamme fondamentale" (1949:9).

Theorists then equate this scale with the notes of maqam (mode) Rast. 'Iffat writes, "maqam Rast is the maqam whose intervals coincide with the intervals of the Arab musical scale" (c.1980:15).

Naming the Fundamental Notes Over Two Octaves

From Villoteau's work we learn of another aspect of the development of the modern period's note names, i.e., the assigning of independent names for the fundamental notes beyond the single octave from Rast to Awj. As mentioned above, the modern nomenclature assigns unique names for the fundamental notes over a two-octave range. This was not the case in the pre-modern nomenclature. According to Villoteau's presentation of Shams al-Din's work (1826:18-22), only the seven notes of a central octave were independently named during this earlier period.

While the full two-octave range of names appears in the two early nineteenth-century works from Syria, al-'Attar (in Shiloah 1979:65-66) and Mashaqah ([1840] 1899:632), they are not mentioned in Egyptian works until well into the nineteenth century (possibly even the late-nineteenth or early-twentieth centuries). Intermediary stages in the development of the two-octave range of independent names in Egypt are evident in the works of Villoteau and Shihab al-Din. In 1798-1801, Villoteau found that, with two exceptions, musicians still used the "pre-modern" system; i.e., they indicated notes above and below the central Rast-to-Awj octave by adding one of two qualifying nouns to the central-octave names (1828:124-125). The word qab was added to indicate notes in a lower octave; thus, qab al-Rast, qab al-Dukah, etc. Jawāb was added to indicate notes in a higher octave; thus, jawab al-Dukah, jawab al-Sikah, etc. (I am here applying the modern-day spellings to the names given in Villoteau. [11]) The two exceptions were that the note an octave above Rast was called "Kirdan" instead of "jawab al-Rast" [12], and the note an octave below Husayni was called "qab al-'Ushayran" instead of "qab al-Husayni" (ibid.:128).

By the time of Shihab al-Din's work (c.1840), one additional note had been given an independent name: the octave above the note Dukah is called Muhayyar (1892:13). Among the sources for the present study, it is not until al-Khula'i (1904:29 and 32) that the fundamental note names over two octaves are presented in an Egyptian work. Perhaps, because they appeared so late in Egypt, the three independent fundamental note names above Muhayyar (see the following table) are often disregarded in favor of the older names, jawab Sikah, jawab Jaharkah, and jawab Nawa.

The Fundamental Arab Scale Over Two Octaves

(al-Khula`i 1904:29-31; al-Sabbagh 1950:36; etc.)

g	Ramal Tuti
	--
	--
	--
f	Mahuran
	--
	--
e-b-	Buzrak
	--
	--
d	Muhayyar
	--
	--
	--
c	Kirdan
	--
	--
B-b-	Awj
	--
	--
A	Husayni
	--
	--
	--
G	Nawa
	--
	--
	--
F	Jaharkah
	--
	--
E-b-	Sikah
	--
	--
D	Dukah
	--
	--
	--
C	Rast
	--
	--
BB-b-	`Iraq
	--
	--
AA	`Ushayran
	--
	--
	--
GG	Yakah

The names for the notes beyond the central octave apparently had the same origins as the non-ordinal names of the central octave: they were named after modes in which they played a dominant role. Thus, at the beginning of the modern period we find fifteen modes with the above fifteen names (see Mashaqan [c.1840] 1899:727ff.).

At some point, probably in the twentieth century, "Saham" was introduced as an alternative name for "Ramal Tuti" (g) (see Rida and al-Hifni 1934:23; al-Shawwa 1946:12; 'Arafah and 'Ali [1942] 1978:15; etc.). Saham (literally, "arrow, dart") is the name used in the present day in Cairo's music institutes.

The Fundamental Octave in a Lower Range

A number of theorists differ from the above presentation by introducing "the fundamental octave" as beginning a fourth below the note Rast, i.e., from GG to G rather than from C to c. Conceptualized from C to c, the fundamental octave stands in the middle of the modern system's two-octave range.

GG <-------> C D E-b- F G A B-b- c <-------> g

Conceptualized from GG to G the fundamental octave occurs as the first of two identical octaves.

GG AA BB-b- C D E-b- F G + G A B-b- c d e-b- f g

Mashaqah is the first among the sources for the present study to present the latter approach, calling the two groups of notes al-dīwān al-awwal and al-dīwān al-thānī, i.e., "the first 'octave'" and "the second 'octave.'" al-Shawwa (1946:10), `Arafah (1967:15) and Farah (1974:73) are among the many later writers who follow this approach and use the same terminology (see also al-Khula`i 1904:31). [13] However, Mashaqah himself comments that both approaches are possible; indeed, he observes, "some [theorists of his day] begin from the note Rast [i.e., C]" ([1840] 1899:219).

A number of theorists in the Middle East have been of the opinion that the shift from the C - c to the GG - G orientation is a recent development, the result of a fairly recent expansion of the range used in Arab music. The Egyptian writer, al-Jundi (1895?), for example, states that, "considering the range of the human voice, three notes have recently been placed below rast, [namely] `iraq, `ochairan [`Ushayran], et yeka [Yakah]" (quoted in Collangettes 1904:415 and Rouanet 1922:2749). This is a reasonable conclusion based on the perspective offered by Shihab al-Din for this author presents the note Rast as the lowest note used in Arab music. According to Shihab al-Din ([1840] 1892:13), the notes from Rast (C) to Awj (B-b-) represent the "first octave"; the notes Kirdan (c) to jawab Awj (b-b-)(which he calls jawab al-Haftkah) represent the "second octave" (al-dīwān al-awwal and al-dīwān al-thānī, respectively).

This evolutionary interpretation is further supported by the common understanding that "Yakah" initially served to name the first note of the series Yakah, Dukah, Sikah, etc., and that it was only after "Yakah" was replaced by the name "Rast" that "Yakah" was reassigned to the note a fourth below Rast. This new position was deemed appropriate since Yakah, meaning "first position," came once again to name the first note of Arab music's "new and enlarged" ambitus. (The notes between Yakah and Rast came to be named 'Ushayran and 'Iraq.)

This "recent-development" understanding has not been confined to Egyptian theorists: "according to the shaykh Mahmud Kahal of Damascus, the introduction of the notes below Rast does not go back beyond a century and is due to a musician from Aleppo" (Collangettes 1904:415).

Despite the logic of these arguments, there is evidence against the "recent-development" interpretation for the three notes below Rast. Walter Feldman notes that the Turkish treatise written in 1700 by Dimitrie Cantemir already contains the notes "Yegah," "Asiran," and "Irak" (personal communication, 9/30/88). Shiloah also notes a sixteenth-century treatise which describes the scale as beginning a fourth below the "first" note. This range, he adds, "occurs frequently in other sources as well" (1981:37-38). See also

Wright's explanation of thirteenth-century Arab theory wherein the names Rast, Dukah, and Sikah are used at times to refer to the fourth, fifth and sixth notes of the "fundamental" scale (quoted in note 8). Collangettes (1904:416) also believes that the lower range already existed in the theories of the thirteenth century scholar, Safi al-Din. In order to resolve this issue, further scholarship is needed on the theory that existed prior to the modern period.

The Intervals Within the Fundamental Scale

After presenting the "fundamental" scale over two octaves, theorists from Mashaqah onward then proceed to analyze the intervals which appear therein. It is within this discussion that the term "quarter tone" (rub‘, literally, "quarter"; pl. arbā‘) first appears in most of our sources. Mashaqah, for example, writes,

> The seven fundamental notes [what he calls abrāj] already discussed in the first section are like a ladder [sullam], the steps being one above the other. But the interval[s] [bu‘d, pl. ab‘ād, literally "distance, interval"] between them are not equal. Rather, some are larger than others, some are smaller... The Arabs divide the interval[s] existing between the abraj into two classes, big and small. The larger is that in which the interval between two adjacent fundamental notes is four arbā‘ [quarter steps]. The smaller is that in which the interval is three quarters. ([1840] 1899:220)

al-Khula‘i copies this passage substituting uṣūl for all but one instance of Mashaqah's *abrāj* (1904:29).

Similar presentations appear in all the major twentieth-century works. See al-Shawwa (1946:8), or Farah who writes,

> the intervals (*ab‘ād*) in the Arab musical scale are of two kinds: the first is a big interval (*bu‘d kabīr*) which equals four quarters of a step (*darajah*); [this is also called] a whole step (*darajah ṣawtiyyah kāmilah*). The second is a small interval (*bu‘d ṣaghīr*) which equals three quarters of a step. (1974:74)

al-Hilu states the same ideas using slightly different terminology (1972:66). He uses the term, *masāfah* (pl. *masāfāt*, literally, "distance, interval") instead of the more common *bu‘d* for "interval". Besides *masāfah kabīrah* (big interval), al-Hilu also calls the larger interval *masāfah kāmilah* (whole step), and *al-bu‘d al-ṭanīnī* (literally, "the resounding interval"), the latter being a term found in the earliest Arabic treatises (see al-Faruqi 1981:42 for reference to a tenth century treatise which uses this term).

As a group, the intervals within the fundamental scale are occasionally called *bardāt*, s. *bardah*; see, for example, Shihab al-Din ([1840] 1892:13), al-Khula‘i (1904:30), who copies Shihab al-Din, D'Erlanger (1949:17), al-Faruqi (1974:65), and others. This term is not, however, very common in the most recent theoretical works. [14]

Having stated that there are two kinds of intervals in the fundamental Arab scale, theorists then explain which intervals are big (*kabīr*) and which are small (*saghīr*). Mashaqah writes that the bigger intervals are "from Yakah to 'Ushayran, from Rast to Dukah, and from Jaharkah to Nawa." The smaller are "from 'Ushayran to 'Iraq, from 'Iraq to Rast, from Dukah to Sikah, and from Sikah to Jaharkah" ([1840] 1899:220; see also al-Shawwa 1946:8 and Fahmi 1965:30).

GG AA BB-b- C D E- b- F G
4/4 3/4 3/4 4/4 3/4 3/4 4/4

al-Khula'i (1904:30), al-Hifni (c.1946:123), al-Hilu (1972:66-7), and Farah conduct this same discussion focusing, however, on the octave from Rast to Kirdan. Farah writes,

> In the Arab musical scale which starts from [the note] Rast there are three intervals (*ab'ād*) of the large variety which are located between Rast and Dukah, between Jaharkah and Nawa, and between Nawa to Husayni.
>
> In [this scale], there are also four intervals of the small variety which are located between Dukah and Sikah, between Sikah and Jaharkah, between Husayni and Awj, and between Awj and Kirdan. (1974:75).

C D E-b- F G A B-b- c
4/4 3/4 3/4 4/4 4/4 3/4 3/4

Twenty-Four Quarter Tones per Octave

Mashaqah (1840:220-221) and numerous later writers (al-Shawwa 1946:8, al-Hifni c.1946:124, Fahmi 1965:30, al-Hilu 1972:66, and Farah 1974:75) then use the above discussion to derive the number of quarter tones in the Arab scale.

> The total number of *arbā'* [quarter steps] in the [octave] scale is thus a product of multiplying. Three large tones (*aṣwāt kabīrah*) times four *arbā'* = 12 *arbā'*. Four small tones (*aṣwāt ṣaghīrah*) times three *arbā'* = 12 [additional] *arbā'*. Thus, the total number of *arbā'* in the scale is 24... (al-Shawwa 1946:8) [15]

In these discussions it is noteworthy that the twenty-four quarter tones are not derived by calculating frequency ratios, string lengths, cents, commas, or the twenty-fourth root of two. We are thus given no mathematical/acoustical value for the size of a quarter step (*rub'*). The exact size of the *arbā'* is not an important issue in most modern Arab theory books. (See Chapter IV for a discussion of those theorists who mention frequency, string length, commas, etc.) The derivation that we are given above functions only to determine the number of *arbā'* per octave, i.e., twenty-four.

B.2. and B.3. The Other Notes:

After discussing the intervals found between the degrees of the "fundamental" Arab scale, modern theory books next present the second and third categories of notes. Together, these last two categories are called *al-arbā'* (the quarter tones) by Mashaqah ([1840] 1899:220ff.), al-furū' (s. far', "the subsidiary" or "the branch" notes) by Shihab al-Din ([1840] 1892:13) and al-Khula'i (1904:30, who copies Shihab al-Din), and 'arabāt (s. 'arabah, literally "carriage, vehicle, cart") by D'Erlanger (1949:17).

By using the same term to name both the second and third categories of notes, these writers are initially recognizing a two-tiered classification of the pitches, i.e., the abrāj versus the arbā' in Mashaqah, or the usūl versus the furū' in Shihab al-Din and al-Khula'i, and the "principal" versus the "complimentary" in D'Erlanger (ibid.).

B.2. The 'Arabat or Ansaf:

More commonly, however, the terms 'arabāt and anṣāf (literally, the "half" notes) are reserved for the second category of notes. [16] There are seven 'arabāt or anṣāf per octave. These notes are already found in the earliest modern-period source (Laborde 1780:437), although Laborde does not use either of these two terms. They were not yet incorporated into the music theory in Egypt in 1798-1801 (Villoteau 1826:123) but they appeared there soon after, since they are accurately presented in Shihab al-Din ([c.1840] 1892:14). Like the fundamental notes, they are each given their own Arabic/Persian names (we will see that this distinguishes them from the third category of notes, to be discussed below).

Most of these names come from the names of modes in which the note in question serves as the main distingushing feature, setting that mode apart from otherwise similar modes. In these cases, the note in question is not the mode's tonic pitch. For example, the main element of maqam Kurd (D Eb F G ...) which distinguishes it from the popular maqam Bayyati (D E-b- F G ...) is the note Eb. Thus the note Eb, one of the _`arabāt_/_anṣāf_, came to be called "Kurd." [17]

In a few instances the _`arabāt_/_anṣāf_ were named after a mode which uses that note as tonic. For example, the note BBb is named after maqam `Ajam `Ushayran, a mode based on this note. In Mashaqah's time, the mode Zirkulah was based on the note C# and, thus, this note took on the name Zirkulah ([1840] 1899:890). [18]

In a number of cases the _`arabāt_/_anṣāf_ have alternate names dating back to the beginning of the modern period. One reason for this is that the mode after which a note was named might, itself, have had more than one name. Shihab al-Din, for example, reports that the note Busalik (E) was also called `Ushaq (or `Ushshaq) ([1840] 1892:14); Mashaqah explains that the mode Busalik was commonly called `Ushaq (or `Ushshaq) ([1840] 1899:886). Another reason for alternate names is the desire to name enharmonic notes with two names rather than one. This is the case with the enharmonic notes Gb and F#, and Ab and G#: For the same reason that the name Hijaz became associated with the note F# (see note 17), so the name Saba became associated with the note Gb: maqam Saba (D E-b- F Gb A ...) differs from maqam Bayyati most prominently by virtue of its use of the note Gb, and thus this note has acquired the name Saba. Similarly, while Hisar came to name the note Gb (see note 17), the name Shuri became associated with the note Ab (maqam Shuri, D E-b F G Ab..., differs from maqam Bayyati most prominently because of its use of Ab). [19]

One last feature regarding the naming of the 'arabāt/ansāf is noted here: a few of these notes at the outer extremes of the scale are not given entirely independent names. Rather they are designated by adding either qarār or jawāb to one of the central-octave note names. (This recalls the pre-modern method for designating notes beyond the central octave.) This has been the case with the notes AAb, BBb, e, and f#. AAb is assigned the same name as Ab with the addition of the word qarār (literally, "resting place, bottom, depth") to indicate the lower octave; thus, "Hisar" and "qarar Hisar." In similar fashion, the early sources (al-'Attar c.1820; Mashaqah c.1840) called BBb by the name "qarar 'Ajam" (Bb is called "'Ajam"). In later years this note acquired its own name, i.e., 'Ajam 'Ushayran. [20] At the high end of the two-octave range, the note e is commonly called "jawab Busalik," Busalik being the name for the note E, jawāb (literally, "answer, reply, octave") indicating the higher octave. Mashaqah and a few others mention an independent name for this note (Husayni Shadd); however, this name did not catch on and is found only seldomly in twentieth-century works. The highest of the *ʿarabāt*/*anṣāf*, f#, is similarly called "jawab Hijaz," Hijaz being the name for the note F#.

In some of the early sources, *qab* or *qabā*, a Turkish word meaning "low," is used in place of *qarār*. Villoteau, for example, found that musicians used *qab* rather than *qarār* in Egypt in 1798-1801 (see also Ronzevalle 1899:298, Dhakir 1895 in al-Khulaʿi 1904:33, and al-Khulaʿi 1904:32). This is not to say that *qarār* is a recent term, however, for it is used by al-ʿAttar (c.1820 in Shiloah 1979:65) and Mashaqah ([c.1840] 1899:632ff.). In the present day, *qarār* is used almost exclusively throughout the Arab Middle East (see Spector 1970:248 for a late example of the use of *qaba*). [21]

Besides *qabā*, Dhakir also uses the Turkish *tīz* instead of the more standard *jawāb* for naming a number of notes in the upper octave (c.1895 in al-Khulaʿi 1904:33). *Qabā* (*Kaba*) and *tīz* are still used in present-day Turkish music theory (see Signell 1977:28-29).

The persistence, in these few cases, of the pre-modern practice of adding qualifying nouns onto central-octave note names (in order to designate notes outside of the central octave) suggests that these notes at the periphery of the two octaves play only a minor role in modern Arab music. Indeed, in the present day, the notes AAb, e, f, f#, and g are clearly played less frequently than the notes of the central octave. The use of *qarār* and *jawāb* for these peripheral notes can be taken as testimony that most of Arab music exists well within a two-octave range. [22]

The various alternate names and spellings for the notes of modern Arab music are listed in Appendix 2. See the discussion in Chapter III on the extent that the Arabic/Persian note names are known and used in the present day.

The Position of the ʿArabāt/Anṣāf

Of the seven *ʿarabāt/anṣāf*, three occur half way between the three large (four-quarter-step) intervals of the fundamental scale, i.e., between C and D, F and G, and G and A.

```
C ¦¦¦ D ¦¦ E-b- ¦¦ F ¦¦¦ G ¦¦¦ A ¦¦ B-b- ¦¦ c
   ^                  ^     ^
   ^                  ^     ^
```

between:		
Rast (C) and Dukah (D)	is	*Zirkulah* (C# or Db)
Jaharkah (F) and Nawa (G)	is	*Hijaz* (F# or Gb)
Nawa (G) and Husayni (A)	is	*Hisar* (G# or Ab)

The other four are found within the four remaining three-quarter step intervals of the "fundamental" scale. In determining the placement of these four remaining *ʿarabāt/anṣāf* two different approaches are followed. These approaches result in different positions for two of these notes. The more elegant of the two approaches uses a single rule for placing all of the seven *'arabāt/anṣāf*: these seven notes all occur two quarter-steps (one half-step) above the seven fundamental notes (thus the derivation of the term "anṣāf") (see al-Shawwa 1946:9 and others):

```
C       D      E-b-      F       G       A      B-b-       c
 +2/4    +2/4      +2/4   +2/4    +2/4    +2/4      +2/4
```

```
C ¦¦¦ D ¦¦ E-b- ¦¦ F ¦¦¦ G ¦¦¦ A ¦¦ B-b- ¦¦ c
   ^     ^       ^    ^     ^     ^       ^
   ^     ^       ^    ^     ^     ^       ^
```

The resulting *anṣāf* are the three given above plus:

between:

Dukah (D) and Sikah (E-b-)	is	*Kurd*	(D# or Eb)
Husayni (A) and 'Iraq (B-b-)	is	*'Ajam*	(A# or Bb)
Sikah (E-b-) and Jaharkah (F)	is	*Busalik*	
Awj (B-b-) and Kirdan (c)	is	*Mahur*	[23]

It is with respect to the last two notes that the controversy arises. These two occur above the fundamental notes Sikah and Awj. Sikah and Awj, being half-flats, are both positioned one quarter-step below the neighboring natural note of Western music, i.e., E natural and B natural respectively (see diagram below). Following the single rule of positioning the <u>anṣāf</u> two quarter-steps above the seven fundamental notes, Busalik falls one quarter-step above E natural (a note which is called E half-sharp) and Mahur falls one quarter-step above B natural (a note called B half-sharp). These are the positions assigned to the <u>anṣāf</u> by Laborde (1780:437), al-Khula'i (1904:31), by one of the sub-committees in the 1932 Congress (<u>Recueil</u> 1934:602), by al-Shawwa (1946:11-12), D'Erlanger (1949:18), al-Sabbagh (1950:33 & 36), Fahmi (1965:31-32), 'Arafah (1967:16-17), Farah (1974:76), and Jabaqji (1983:8).

```
E-b-  :  :  F                    B-b-  :  :  c
      :  :                             :  :
      ^                                ^
      the West's E natural             the West's B natural
```

Many theorists, however, differ with the above by positioning Busalik and Mahur only one quarter-step above Sikah and 'Iraq respectively. Busalik is thus equated with E natural; Mahur is equated with B natural. See, for example, al-'Attar (in Shiloah 1979:65-55), Mashaqah ([1840] 1899:632), Dhakir (c.1895 quoted in al-Khula'i 1904:33), al-Hifni (c.1946:164-165), al-Hilu (1972:68), Mash'al (c.1980:56 and 1979:17), Muhammad (1984:12), Qatr (1968:4) and 'Iffat (c.1980:16). This is also the approach taught in present-day Cairo in theory classes at the main institutes of music.

From the point of view of performance practice, it is the latter approach which seems to hold sway, i.e., Busalik and Mahur are equated with E natural and B natural, respectively. This is clearly seen in the naming of the Arab end-blown flutes (the nāy, pl. nāyāt). Nāyāt commonly come in sets of seven, each nāy being tuned to a different pitch. The third nāy of the standard set is tuned to E natural [24] and is universally called the "Busalik" nāy (see the nāy method books, Mash'al 1979:17 and 'Iffat c.1980:46).

The Fundamental Notes and the ‘Arabāt/Anṣāf [25]

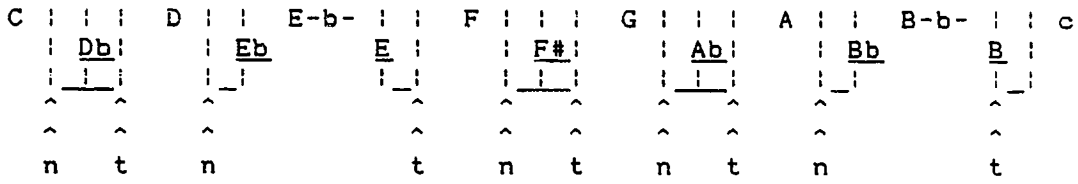
(with Busalik as E natural; see Appendix 2 for variant names)

g		RAMAL TUTI (JAWAB NAWA)	
--		-----	
---	gb/f#	--------	jawab Hijaz
--		-----	
f		MAHURAN	
--		-----	
---	e	--------	jawab Busalik
e-b-		BUZRAK	
---	eb	--------	Sinbulah
--		-----	
d		MUHAYYAR	
--		-----	
---	c#/db	--------	Shahnaz
--		-----	
c		KIRDAN	
--		-----	
---	B	--------	Mahur
B-b-		AWJ	
---	Bb/A#	--------	‘Ajam
--		-----	
A		HUSAYNI	
--		-----	
---	Ab/G#	--------	Hisar
--		-----	
G		NAWA	
--		-----	
---	F#/Gb	--------	Hijaz
--		-----	
F		JAHARKAH	
--		-----	
---	E	--------	Busalik
E-b-		SIKAH	
---	Eb/D#	--------	Kurd
--		-----	
D		DUKAH	
--		-----	
---	Db/C#	--------	Zirkulah
--		-----	
C		RAST	
--		-----	
---	BB	--------	Kawasht
BB-b		‘IRAQ	
---	BBb/AA#	--------	‘Ajam ‘Ushayran
--		-----	
AA		‘USHAYRAN	
--		-----	
---	AAb	--------	qarar Hisar
--		-----	
GG		YAKAH	

B.3. The Nīmāt and Tīkāt

The third category of notes, ten in number, divide the remaining undivided half-step intervals in the octave scale. Called nīmāt and tīkāt (s. nīm and tīk), these notes first appear in Laborde (1780:437) where they are given over a single-octave range. al-'Attar (c.1820, in Shiloah 1979:65-66) and Mashaqah ([1840] 1899:632) extend Laborde's presentation by naming these notes over two full octaves. In Egypt, the nīmāt and tīkāt category of pitches are first presented by Shihab al-Din ([1840] 1892:13ff.); however, claiming that they are fourteen per octave rather than ten, he declines to discuss them further. It is quite possible that Shihab al-Din simply did not understand this category of notes. Later Egyptian theorists finally adopted the system of nīmāt and tīkāt as they were presented in the earlier Syrian-based works. [26]

The nīmāt and tīkāt occupy the lowest level of the tonal hierarchy. One manifestation of this subordinate status is the fact that these notes are not given their own independent names. Rather, they are named in relation to their neighboring 'arabah. If they are lower than their neighboring 'arabah, then they are called "nim _x_", where "x" is the name of the 'arabah. If they are higher than their neighboring 'arabah, then they are called "tik _x_." [27] When Busalik is E natural, there are five nīmāt and five tīkāt (marked "n" and "t," respectively, in the following diagram; the *ʿarabāt* are underlined.



Assuming that Busalik is E natural, the forty-eight notes of the two-octave general scale (plus a forty-ninth, being the second octave of the first) are shown in the following table. The fundamental note names are given in capital letters; the *ʿarabāt* are underlined. Note that the four-quarter-step intervals in the fundamental scale (C to D, F to G, G to A, etc.) have three internal quarter steps and are thus filled by a *nīm*, an *ʿarabah*, *and* a *tīk*; the three-quarter-step intervals have only two internal quarter steps and are thus filled by an *ʿarabah* and either a *nīm* *or* a *tīk*:

THE 49 NOTES OF THE MODERN ARAB SCALE

(see Appendix 2 for alternate names and spellings)

g		JAWAB NAWA	
-	g-b-	-	jawab tik Hijaz
-	f#	-	jawab Hijaz
-	f=/=	-	jawab nim Hijaz
f		MAHURAN	
-	e=/=	-	jawab tik Busalik
-	e	-	jawab Busalik
e-b-		BUZRAK	
-	eb	-	Sinbulah
-	d=/=	-	nim Sinbulah
d		MUHAYYAR	
-	d-b-	-	tik Shahnaz
-	c#	-	Shahnaz
-	c=/=	-	nim Shahnaz
c		KIRDAN	
-	B=/=	-	tik Mahur
-	B	-	Mahur
B-b-		AWJ	
-	Bb	-	`Ajam
-	A=/=	-	nim `Ajam
A		HUSAYNI	
-	A-b-	-	tik Hisar
-	Ab	-	Hisar
-	G=/=	-	nim Hisar
G		NAWA	
-	G-b-	-	tik Hijaz
-	F#	-	Hijaz
-	F=/=	-	nim Hijaz
F		JAHARKAH	
-	E=/=	-	tik Busalik
-	E	-	Busalik
E-b-		SIKAH	
-	Eb	-	Kurd
-	D=/=	-	nim Kurd
D		DUKAH	
-	D-b-	-	tik Zirkulah
-	Db	-	Zirkulah
-	C=/=	-	nim Zirkulah
C		RAST	
-	BB1/2#	-	tik Kawasht
-	BB	-	Kawasht
BB1/2b		`IRAQ	
-	BBb	-	`Ajam `Ushayran
-	AA1/2#	-	nim `Ajam `Ushayran
AA		`USHAYRAN	
-	AA1/2b	-	qarar tik Hisar
-	AAb	-	qarar Hisar
-	GG1/2#	-	qarar nim Hisar
GG		YAKAH	

If, however, Busalik is E half-sharp and Mahur is B half-sharp, then differing numbers of *nīmāt* and *tīkāt* result: instead of five and five, there are seven *nīmāt* and three *tīkāt*. The 7 + 3 count can be explained as follows. If the *ʿarabāt* are all one half-step above the seven fundamental notes, then the notes which fill these seven half-steps must be *nīmāt* (because they would all be positioned below their neighboring *ʿarabah*). According to this approach, then, there is a single rule for placing the seven *nīmāt*: they all occur one quarter-step above the seven fundamental notes (Fahmi 1965:55). The remaining three undivided half-steps are filled by *tīkāt* since they are all positioned above an *ʿarabah*; i.e., above Db, F#, and Ab. The following diagram shows the position of these notes when Busalik is E=/=. The *ʿarabāt* are underlined, the seven *nīmāt* are marked "n," and the three *tīkāt* are marked "t."

```
C ¦ ¦ ¦  D ¦ ¦  E-b- ¦ ¦  F  ¦ ¦ ¦ G ¦ ¦ ¦  A ¦ ¦  B-b- ¦ ¦  c
  ¦ Db¦    ¦ Eb      ¦ E=/=  ¦F# ¦   ¦Ab ¦    ¦ Bb      ¦ B=/=
  ¦_¦_¦    ¦_¦       ¦_¦     ¦_¦_¦   ¦_¦_¦    ¦_¦       ¦_¦
  ^   ^    ^         ^       ^   ^   ^   ^    ^         ^
  ^   ^    ^         ^       ^   ^   ^   ^    ^         ^
  n   t    n         n       n   t   n   t    n         n
```

The above discussion runs the risk of overemphasizing the aspect of conflict between two largely identical systems of nomenclature. However, as theory and method books are almost equally divided on this issue, it seems appropriate to present both approaches. To summarize, the two systems differ only in how they fill the two three-quarter step intervals existing between Sikah and Jaharkah (E-b- and F) and between Awj and Kirdan (B-b- and c):

E-b-	E		E=/=	F
Sikah	nim Busalik		Busalik	Jaharkah
		vs.		
Sikah	Busalik		tik Busalik	Jaharkah

and

B-b-	B		B=/=	c
Awj	nim Mahur		Mahur	Kirdan
		vs.		
Awj	Mahur		tik Mahur	Kirdan

The conflict reoccurs in the lower octave with respect to be the note Kawasht (BB or BB=/=) and in the higher octave with respect to the note jawab Busalik (e or e=/=).

Arab theorists do not offer any explanations for the above conflict. The two approaches have existed since the early years of the modern period, Laborde (1780:437) presenting Busalik as E=/=, al-'Attar (c.1820 in Shiloah 1979:65-66) and Mashaqah ([1840] 1899:632) presenting Busalik as E natural. The two systems might best be understood as evidence of the conflict involved in the change from the pre-modern to the modern-day tonal systems, the former with its seven-tone fundamental scale and an unspecified number of intermediary pitches, the latter with its twenty-four tones per octave. The single most important factor in the development of the "Busalik as E half-sharp" approach might well have been its simplicity, i.e., a single rule serves to define the positions of all of the seven ʿarabāt/anṣāf; another single rule defines the positions of all seven nīmāt. On the other hand, the "Busalik as E natural" approach seems to best reflect the spirit of the three-tier classification system, for according to this system the more important of the two notes should be considered the ʿarabah, while the less important should be relegated to the last group, the nīmāt/tīkāt. In the realm of performance, the note E natural has been used much more frequently than the note E half-sharp. [28] Thus, it is E natural which should be included among the ʿarabāt/anṣāf; i.e., it deserves to be named Busalik. E half-sharp should be relegated to the third category where it would be called tik Busalik (Berner 1937:14-15 argues this same point). In similar fashion, it can be argued that the note B should be included among the ʿarabāt/anṣāf since it is used much more frequently than the note B=/= (in fact, the note B=/= is rarely, if ever, used; see below).

C. Are All the 24 Quarter Notes Actually Used in Practice?

Although theorists have conceptualized a scale of twenty-four notes per octave, a number of the notes in the nīmāt and tīkāt category are not used in practice. This point has been recognized by a number of Western writers from Collangettes onward (see Collangettes 1904:419-20). al-Faruqi (1974:61-62) for example, writes, "... many of the twenty-four quarter-tone intervals which make up the octave scale are theoretical additions to the tones of the practical art in order to produce a logical system" (this point is explored further in Chapter IV).

Any attempt to isolate the notes not used in modern-day practice is fraught with problems, mainly because it is theoretically possible to transpose any mode to all of the twenty-four quarter-step positions. The process of transposition, however, while theoretically unrestricted, is commonly limited in the realm of performance to a small number of positions sanctified by the norms of common practice. Some writers, including al-Faruqi (ibid.:66ff.), have dealt with this issue by considering only the modes in root position (i.e., by ignoring the practice of transposition). al-Faruqi concludes her study by saying that "only fourteen of the twenty-four tones are included in the important maqamat [in root position]" (ibid.:67). These are the seven notes of the fundamental scale plus the seven ʿarabāt/anṣāf (i.e., the pitches of the first two categories of notes). We have noted that these are the twelve half-steps of Western music plus the two half-flats, E-b- and B-b-.

While it is an important observation that these fourteen notes fulfill a dominant role in the main maqamat in root position (this is in keeping with the three-tier classification of the pitches), al-Faruqi's statement is misleading in at least four respects. First, al-Faruqi has used as her source a list of thirty modes provided by D'Erlanger (1949:113-115) about which D'Erlanger comments, "We will reproduce the scales having reduced them to their simplest [form]" (ibid.:112). In later discussions of these thirty modes, D'Erlanger indicates that two of them, the modes Yakah and Farahnak, include one of the nīmāt, the note nim Hijaz, i.e., F=/= (ibid.:118 and 162). While neither of these two modes are commonly performed, maqam Yakah is frequently mentioned in both theory and method books where it is presented as including the note F=/= (see al-Shawwa 1946:17; 'Arafah and 'Ali 1976:25; Fatah Allah and Kamil 1982:16; Muhammad 1984:36). [29]

Second, a number of the common modes in root position use one of the nīmāt either as a leading tone to the tonic or as an ornament. (D'Erlanger's simplified presentation does not consider either of these points.) For example, the modes Sikah and Huzam use nim Kurd (D=/=) as the leading tone to their tonic note, E-b- (see discussion of this leading tone in Chapter V); maqam Rast uses the same note as an ornament (see Chapter X, section H); and the modes Rahat al-Arwah and Bastanikar use the note nim 'Ajam 'Ushayran (AA=/=) as the leading tone to their tonic, BB-b-.

Third, comments such as those by al-Faruqi and Collangettes fail to take into consideration the descriptions of modes found in the early modern-period sources. For example, in his c.1840 work Mashaqah discusses ninety-five modes which he says were "current in [his] time among the learned in Syria" (1899:932). In these modes all but two of the twenty-four quarter-steps are used at least once in one of the two octaves. According to this source, then, it is possible to consider only two of the twenty-four notes per octave as "theoretical additions to the tones of the practical art." [30] The two notes not found in Mashaqah's modes are tik Mahur (which he calls tik Nahuft), i.e., B=/= or c-b-) and tik Hijaz, i.e., G-b-.

Fourth, and perhaps more significant than the above points, it is misleading to ignore the practice of transposition as if it were an insignificant phenomenon in the performance tradition. Transposition is one of the most basic and essential elements of the Arab modal system. (See Chapter X, section M for a discussion of the role of and rules for transposition.) Indeed, if one were to compile a list of the ten most common modes in present-day practice allowing for transposed modes, it is likely that as many as three of the ten would be transposed modes. Two maqamat which would undoubtably be on this list are Rast and Bayyati transposed to G. Both of these modes require one of the *nīmāt*/*tīkāt*: Rast on G uses nim Hijaz (F=/=) as its leading tone; Bayyati on G uses the note tik Hisar (A-b-) for its second degree. Two other examples of transposed modes, while not among the "top-ten" modes, occur somewhat commonly. Maqam Rast on D uses nim Zirkulah (C=/=) as its leading tone and nim Hijaz (F=/=) (sections of Rast on D occur in the popular songs "Nahar al-Khalid" sung by Muhammad 'Abd al-Wahhab and "Inta 'Umri" sung by Umm Kulthum); Huzam on F=/= uses tik Busalik (E=/=) as its leading tone (see "Inta 'Umri").

From the above discussion of leading tones, ornamental notes, and transposition, six of the ten *nīmāt*/*tīkāt* (the notes F=/=, A-b-, D=/=, A=/= or AA=/=, C=/=, and E=/=) must be added to al-Faruqi's list of notes used in modern-day Arab music. The remaining four notes, nim Hisar (G=/=), tik Zirkulah (D-b-), tik Mahur (B=/=), and tik Hijaz (G-b-), can be said to be used rarely or not at all in the present day. The first two of these, however, are included in Mashaqah's descriptions of the modes of the early modern period. [31]

D. *More Than Two Octaves?*

Arab music is generally understood to exist within a two-octave ambitus. In part, this can be seen as a continuation of the Greater Perfect system of ancient Greek theory, a concept that was adopted by Arab theorists during the medieval period. [32] On a more contemporary level, this span is recognized as reflecting the natural range of the human voice and also the optimum range of a number of the traditional Arab instruments, including the ʿūd and the nāy (see al-Hifni c.1946:173). In the realm of theory, the lack of independent names for a number of the notes at both ends of the two-octave general scale (i.e., the use of qarār to name the notes GG=/=, AAb, and AA-b-, and the use of jawāb to name many or all of the notes above e-b-) tends to support the idea that Arab music exists well within the two octaves recognized by the modern theory.

Nevertheless, a number of theorists have discussed wider ranges in their writings. Mashaqah seems to be guided by the principles of physics when he comments that the number of octaves are "inherently unlimited". He proceeds to name the notes of the first octave (Yakah to Jaharkah), the second octave (Nawa to jawab Jaharkah or Mahuran), a third octave (jawab Nawa, jawab Husayni, jawab Awj, ... to jawab Mahuran, i.e., f to f'), and then says that additional octaves are named by adding additional jawābs onto the note names, thus jawāb al-jawāb, jawāb jawāb al-jawāb, etc.. He also gives the note names for an octave below Yakah (qarar Jaharkah, qarar Sikah, qarar Dukah, ... to qarar Yakah), and concludes that one could continue in this manner (by adding additional jawābs and qarārs onto the note names) without end (1840:218-19; al-Khulaʿi includes an edited version of this passage; 1904:31). Indeed, if one were to name notes outside of the two-octave range in the present day, this is the nomenclature that one would use.

Elsewhere, Shihab al-Din ([c.1840] 1892:13) and al-Khula'i, who copies him (1904:29), speak of there being three distinct octaves, the first from Rast to Awj (C to B-b-), the second from Kirdan to jawab Awj (c to b-b-), and third from jawab Kirdan to jawab jawab Awj. These statements are based on an understanding that the Arab scale, at one point, did not extend below the note Rast (C). (This is discussed above in this chapter.) However, three notes below Rast--'Iraq (BB-b-), 'Ushayran (AA), and Yakah (GG)--are described in treatises throughout the modern period, beginning with al-'Attar (c.1820) and Mashaqah (c.1840). They are also mentioned in Egyptian works by Dhakir (1895) and al-Khula'i (1904).

The idea of a three-octave ambitus is also found in a number of the diagramatic presentations of the Arab scale that were apparently a common feature in theoretical works at the beginning of the modern period. These diagrams usually consisted of two concentric circles, divided by as many spokes as there are notes in Arab music. The note names are written, one per spoke, in ascending order near the circumference of each of the two concentric circles. These diagrams served two purposes. Besides presenting the note names, these diagrams are representations of three-dimensional devices constructed to illustrate the process of modal transposition. In the three-dimensional versions, the two concentric circles could rotate around the central point independently. When one wanted to know the notes used in a specific transposition of a given mode, one would find the origin tonic note on the outer of the concentric circles and then turn the two circles until the original tonic note was exactly aligned with the new desired tonic note. Having done this, one would locate the notes of the desired maqam in its root position on the outer circle. These notes would then be exactly aligned with the notes on the inner circle which were needed for the maqam in its new transposition.

In the works surveyed for the present study, six such diagrams are included (Mashaqah [1840]1899:632; al-Khula'i 1904:40v; al-Sabbagh 1950:36; Qasis n.d.:228; Mash'al 1979:8; and al-Jabaqji 1983:8; the diagram in al-Khula'i's work is reproduced in Rouanet 1922 (1):2754-55 along with a French translation). Salah al-Din, in a c.1947 work, calls these diagrams by the name "musical compass" (al-būṣalah al-mūsīqiyyah). [33] While three of the compasses (those in Mashaqah, al-Sabbagh and Qasis) include only the traditional two-octave ambitus, the remaining three (in al-Khula'i, Mash'al, and al-Jabaqji) include 72 notes covering three octaves (i.e. 24 X 3). (al-Khula'i's and al-Jabaqji's diagrams are virtually identical, differing only in the peripheral ornamentation.) The tessitura of the three-octave range is identical in these three diagrams (Mash`al's diagram may well might based on one of the other two) and is somewhat surprising: the lowest note is qarar nim `Ajam `Ushayran (BBB'b or AAA1/2#; i.e., 5 quarter-steps above the note qarar Yakah, GGG); the highest note is jawab Husayni (the note 'a', i.e., a whole step above jawab Nawa). These two notes are not mentioned elsewhere in Arab theory books as the lowest and highest notes of the overall ambitus. Perhaps it is significant that the note jawab Husayni is given as the highest note in early Turkish works, i.e., by Cantemir (1700) and Abdul Baki Dede (1795), where it is called tiz Husayni (Walter Feldman, personal communication 12/27/87). The same can not be said for the lower limit. Thus, these three diagrams seem idiosyncratic in their ambitus, representing neither commonly held ideas of music theory nor the norms of performance practice (see the following discussion).

While theories which extend the overall ambitus have gained little acceptance, there are four important challenges to the two-octave limit from the realm of performance. First, it is not uncommon for composers to extend the range slightly: the upper range is occasionally extended to "a" (see "Longa Yorgo" or "Samā`ī Shatt `Araban," in `Arafah 1976:38, and `Arafah and `Ali 1978:79, respectively, two Turkish pieces which are part of the traditional Arab music repertoire; see "Dhikrayātī" by al-Qasabji, in `Arafah 1976:32; and "Longa Hijaz Kar" by George Michel which use "a flat"). Less common are compositions which extend the range to "b flat" (see "Samā'ī 'Ajam" by Tawfiq al-Sabbagh, in 'Arafah and 'Ali 1978:141, for example).

Second, al-Khula'i and D'Erlanger indicate instances where modes whose tonic is the note Yakah (GG) require the use of a leading tone below the tonic, thereby extending the lower range below GG. al-Khula'i (1904:44) gives one example: maqam Farahfaza is said to use "aradī Hijaz," his name for "qarar Hijaz" or FF#. D'Erlanger gives four examples in his 1949 work (p.122-128). In his 1933 work (p.207), D'Erlanger also describes a mode based on BBb (the note 'Ajam 'Ushayran) which he says uses the note FF or qarar Jaharkah. (D'Erlanger calls this note "Shāhwar", a name that does not appear in any of our other sources.)

Third, the individual musical instruments of Arab music are not restricted to a two-octave range. Each instrument has the ability, to varying degrees, to exceed this range. The wider range can be used in improvisation or in rendering a pre-composed melody at a higher or lower octave. An example of an instrument with a wide range is the Arab qānūn (a zither). The qānūn commonly has 26 courses of strings with a range of three octaves and a fifth. In a 1934 work (p.23), Mustafa Rida and al-Hifni name the strings as follows: qarar qarar Jaharkah, qarar Yakah, qarar 'Ushayran, qarar 'Iraq, qarar Rast, qarar Dukah, qarar Sikah, qarar Jaharkah and Yakah (i.e., a major ninth below the note Yakah, GG); then Yakah to Saham (or jawab Nawa, i.e., GG to g); then jawab Husayni, jawab Awj, and jawab Kirdan.

Among music theorists, only al-Hilu seems to respond directly to these two points. After presenting the traditional two octaves (GG to g), he says that ten additional quarter-notes belonging to a third octave are "useful." These ten start with jawab Nawa (g), the top of the traditional range, include jawab Husayni and jawab Awj, and extend to jawab tik Nahaft (b=/=), a quarter-step below jawab Kirdan(c')(1972:69-70). While it is surprising that al-Hilu stops short of including jawab Kirdan (c'), it is clear that he is attemping to provide for the expanded range found, on occasion, in performance.

What would seem to be a fourth challenge to the concept of the two-octave ambitus is the fact that the various instruments, when played together, create a total sound which encompasses three or even four octaves. On the traditional instruments (*ʿūd*, *qānūn*, *nāy*, and violin), a given melodic line is rendered in three different octaves. The violin plays in a central octave (usually equivalent to the octave starting from the West's "middle C"). The *ʿūd* plays an octave lower than the violin(s), while the *nāy* plays an octave higher (the *qānūn* can play in any of these three octaves; in fact, it is a common for the qanun player to play two octaves at the same time). With the addition of the cello and contrabass (commonplace in Arab music since the

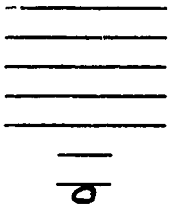
1930s) the ambitus is extended to include a fourth octave, the contrabass and occasionally the cello playing an octave below the _`ūd_ (see chart below). When a given melody line requires a shift to a higher register, all of these instruments shift to their own respective higher octaves, thus preserving the three (or four) octave spread.

Surprisingly, though, this four-octave spread is not viewed as a challenge to the concept of a two-octave ambitus. Rather, each instrument is thought to manifest the same two octaves, each in its own range. Thus when the various instruments play a given note, say _Rāst_, the resulting sound is a note reproduced over four different octaves, yet it is still thought that each instrument is playing the note "Rast" (see chart below). The _nāy_'s pitch, an octave above the violin's, is not thought to be _Kirdān_; similarly the _`ūd_ and contrabass are not thought to be playing _qarār Rāst_ and _qarār qarār Rāst_, respectively. When the note, Kirdan, is called for, then all the instruments will shift to their respective higher octaves.

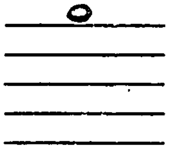
The two-octave ambitus is thus a relative concept. It is a system of intervallic relationships which is not restricted in terms of its position among the many octaves available for music performance; it could be any two octaves, depending on the musical instrument in question.

This approach to the perception of overall ambitus manifests itself in the practice where all musicians read music from the treble clef, i.e., from the same two-octave range, no matter where their particular instrument's range might fall. Yakah is transcribed below the second ledger line beneath the staff; jawab Nawa is notated in the first space above the staff (see Chapter III on the use of Western notation):

Yakah:



jawab Nawa:



The Central Octave and the Note Rāst (C) on the Main Arab Musical Instruments

(the central octave is indicated by a line of dashes; the note which is the called "Rast" on each instrument is underlined):

```
                                     >>> : <<< middle C
                                         :
nay (Dukah)                              c          c'-----------c''     g''
violin                          G        c-----------c' d'  ...
qanun        (FF)GG     C                c-----------c'          c''(d'')
'ud        (CC)         C------------c  ...
cello       CC          C------------c  ...
bass  EEE   CC------------C ...          :
                                         :
                                     >>> : <<< middle c
```

NOTES FOR CHAPTER II

1. It is not known for sure whether the twenty-four-tone scale was first created in the Arab world or in Turkey. After a sojourn in Istanbul from 1781 to 1786, the Italian writer Toderini reported that Turkish music uses twenty-four notes per octave, two for every half step found in Western music (1789:iii and 238-239). He did not, however, give the names of the twenty-four notes as we find in Laborde. With Toderini's presentation in mind, it is significant, first, that Laborde reports the quarter-tone scale to be the "Arab" scale; second, that Laborde includes a separate section on Turkish and Persian music and thus shows that he is aware of a distinction between Arab and Turkish musics; and third, that Laborde's source, de Tott, although stationed in Istanbul, had major connections with the Levant region (he was "inspector of French commercial establishments throughout the Levant"; see p. 43 above).

It is noteworthy that the third category of pitches, the nīmāt/tīkāt which play a major role in both modern Arab and Turkish theory, is not mentioned by two eighteenth-century Turkish theorists, i.e., neither by Cantemir who wrote a treatise in 1700, nor by Abdul Baki Nasir Dede who wrote in 1795. Cantemir used the term nīm pardah to refer to the second category of pitches (Walter Feldman, personal communication 12/30/87). This, combined with the documentation provided in Laborde's work, supports the idea that the modern three-tiered twenty-four-tone scale was created in the Levant sometime in the eighteenth century. This conclusion is further supported by the treatises of the Levantine theorists, al-‘Attar and Mashaqah, which are discussed in the following pages.

2. My information on this source comes from Shiloah's RISM volume (1979:64-66). Shiloah's statement, "We may conclude ... that the division of the octave into twenty-four equal quarters ... may have been established by al-‘Attar" (p.64), would appear incorrect in light of Laborde's exposition in 1780. Clearly the twenty-four tone scale predated al-‘Attar.

3. Because I have not seen a number of late-nineteenth-century Cairo music treatises, I cannot date the earliest Egyptian statement of the twenty-four-tone scale. Among the sources for the present study, al-Khula‘i (1904) presents the earliest statement of this scale by an Egyptian.

4. Mahmud Kamil, a Cairo ‘ūd player and music scholar, suggests that Mashaqah uses this term in recognition of the influence the planets (and the musical notes) are felt to exert on human emotions (personal communication, 5/26/87). It is not clear whether Mashaqah invented this term himself or was following earlier precedents. The term appears again

in al-Jundi (1895?; quoted in Collangettes 1904:415) and in al-Khula'i (1904) in passages copied from Mashaqah.

5. Differences in Persian and Arabic orthography result in different spellings for these names in the two languages: the Persian letters "g," "ch," "p," and "e" do not exist in Arabic and are replaced in the latter language by the analogous letters "k," "j," "b," and "i" or "a," respectively. As a result, the Persian "gah" is rendered "kah", "Segah" is rendered "Sikah", "chahargah" becomes "jaharkah", and "panjgah" becomes "banjkah".

Mashaqah ([1840] 1899:219) and Ronzevalle (1899:222ff.) spell "Yakah" with two k's, i.e., "Yakkah." al-Shawwa spells it "Yak kah" (1946:10). al-Shawwa also spells "haft" as "hafth" (ibid.:8).

6. In Arabic theory books, Rast is commonly translated as "mustaqīm," literally, "upright, erect, correct, sound proper" (al-Shawwa 1946:8; al-Khula'i 1904:29; al-Hifni c.1946:123; al-Hilu 1972:66). D'Erlanger translates "Rast" as "normal ou regulier" (1949:9).

See D'Erlanger (1949:8-19) for his presentation of this same material.

7. See Moustapha 1887:250ff., Arian 1924:164, *Recueil* 1934:600, and D'Erlanger [c.1932] 1949:12-13 for late examples of the use of the name 'Iraq for the seventh note of the fundamental scale. Qadri Surur, a professional *nāy* player and teacher of *nāy* and music theory in Cairo, comments that 'Iraq is used more commonly than Awj among present-day Cairo musicians (personal communication 6/22/87).

8. Although modern Arab theory books make no attempt to date the earliest use of these ordinal names, Wright tells of an early formative stage: "*segah* is one of a set of terms (the others being *dugah*, *chahargah*, and *panjgah*) which receive their first mention in the *Durrat al-Taj*...," a c. 1300 treatise written in Persian (1978:61). The series of names were used in a number of different contexts and apparently did not yet include either Yakah or the names for the sixth and seventh positions (i.e., Shashkah and Haftkah). One way in which they were used was to "denote notes two to five of [the model] *rast* (and sometimes, by extension, notes two to five of any given scale) or they may relate to segments of the *rast* scale starting, generally, from the fourth and comprising the number of notes indicated by the name. Thus *segah* designates here the notes c d e-b-" (ibid.). From Wright's comments it appears that the modern period's association of Rast with the terms Dukah, Sikah, etc., may in fact be a continuation of a long-standing (or a reinstatement of a long-forgotten) practice, rather than a somewhat-recent substitution of the name "Rast" for "Yakah," as it is

presented in modern Arabic theory books.

One of the earliest presentations of the full series of seven ordinal note names (Yakah, Dukah, Sikah, etc.) appears in a treatise which Shiloah tentatively dates as being from the 14th century (*Kitāb al-an'ān bi ma'rifat al-Anghām* by Shams al-Din al-Dhahabi; Shiloah 1979:83-4). The seven note names were apparently used throughout the 15th to 17th centuries (see Shiloah ibid.:53,80,96, and 239). As a group, these notes were called *buḥūr* (s. *baḥr*, i.e., "sea"), a term which is not found in modern theoretical works.

9. This treatise is later identified by Henry George Farmer as *al-Shajarah dhāt al-Akmām* (*Recueil* 1934:653). Neither Farmer nor Shiloah provide a date for this work (see Shiloah 1979:419).

10. See, however, the title given to the fourth section of Mashaqah's treatise, "On the Division of the Octave [*dīwān*] into Two Analogous Groups [also called *dīwān*]" (*fi qismah al-dīwān ilá dīwānayn mutashākilayn*) (Ronzevalle 1899:296 and 1913:74). Here *dīwān* obviously retains the meaning of a "collection" of notes since it is used to refer to groups of eight notes and also to groups of five notes (the octave GG to G is broken down into two symmetrical groups, GG to D and C to G). This title and the section which follows are repeated in al-Khula'i 1904:34 and are discussed in Rouanet 1922:2753. See also Ronzevalle (ibid.:220 n.1) where tetrachords are referred to with the term *dīwān*.

Mashaqah also uses the word *martabah* (literally, "step, grade, class) for "octave" ([1840] 1899:219). al-Hifni also uses *ṭabaqah* (literally, "layer, class") (c.1946:41). In the present day, *ūktāf* (octave) is also common (see al-Hifni, ibid.).

11. Villoteau gave the note names as follows: Rast, Doukah, Sihkah, Girkeh, Naoua, Hosseyny, E'raq, and Kirdan. The lower octave of the note Hosseyny is given as Qab el-Ochyran (1828:128).

12. Laborde (1780:437), al-'Attar (in Shiloah 1979:65), and Mashaqah ([1840] 1899:632) all give the name "Mahur" instead of "Kirdan" for the note an octave above Rast. This was undoubtably the prevailing name in the Levant at the beginning of the modern period. Shihab al-Din, a contemporary of Mashaqah writing in Egypt, is the first of our sources to give the name Kirdan for this note. Subsequently theorists from throughout the Arab world have called this note Kirdan.

13. These later writers call the combined two-octave span "the Arab musical scale" *al-sullam al-mūsīqī al-'arabī* ('Arafah 1976:15) or "the natural scale [of Arab music]" (*al-sullam al-ṭabī'i*) (al-Shawwa 1946:10).

14. However, the term bardah is used to refer to only the larger of the two intervals, i.e. the whole tone of four quarter steps, by Farah (1974:76) and al-Hilu (1972:68). al-Faruqi objects to this restricted usage (1974:65). Meanwhile, Shihab al-Din ([1840] 1892:15), al-Khulaʿi (1904:31 and elsewhere), al-Sabbagh (1950:35), and the anonymous treatise referred to in Villoteau (1826:17ff.) use the same term to refer to the seven fundamental notes themselves. M. Dhakir (c.1895, quoted in al-Khulaʿi 1904:33), spells the term pardah (using a "b" with three dots below it, thereby acknowledging the word's Persian origins) and uses it to mean any "note," not necessarily one of the seven fundamental notes. al-Faruqi (1981:31) cites al-Daquqi (1965:85) as using bardah with this latter meaning. This is a clear example of the often fluid nature of Arabic music terminology.

15. In Egypt, the concept of twenty-four quarter steps per octave appears some time after Shihab al-Din's c.1840 work for this treatise states that there are twenty-eight quarter steps per octave.

16. al-Khulaʿi (1904:30), al-Sabbagh (1950:35), Qatr (1968:4), Farah (1974:76), Mashʿal (c.1982:59) and Muhammad (1984:11-12) use ʿarabāt for the second category of notes. al-Shawwa (1946:9-10), al-Hilu (1972:68) and ʿArafah (1976:16) use anṣāf.

17. Among the ʿarabāt/anṣāf names which can be explained in this fashion are the names Busalik (E), Hijaz (F#), Hisar (G#), Mahur, and Shahnaz. Maqam Busalik (D E F G...) differs from Bayyati (D E-b- F G...) mainly because of its E natural; thus this note came to be associated with this mode and eventually came to be called by the same name. As for Hijaz, during the period when the note names were being established this mode was conceptualized as having the notes D E-b- F# G... (see Mashaqah [1840] 1899:888). Differing from Bayyati mainly by virtue of its F#, the note itself came to be called Hijaz (maqam Hijaz is now understood to use the notes D Eb F# G...). During this same period Hisar (now D E F G# A...) was conceptualized as having the notes D E-b- F G# A... (ibid.:887). Differing from Bayyati only in its G#, this note came to be called Hisar. In similar fashion maqam Mahur is often thought to use the same notes as the popular maqam Rast except for the former's use of B natural; this note came to be called Mahur. And maqam Shahnaz differs from the popular maqam Hijaz most prominently because of the former's use of the note c#; this note came to be called Shahnaz.

18. D'Erlanger offers this as the reason for the naming of the note E as Busalik. He suggests that this note might have served as the tonic of a Busalik mode with the notes E F G A (1949:81). Wright also suggests the possibility of this derivation (1978:273).

19. Another reason for alternative names for a few *ʿarabāt/ansāf* is the desire to distinguish between slight differences in pitch. This point is discussed in Chapter IV. One example is offered here. The Eb of maqam Nahawand is commonly thought to be a litte lower in pitch than the Eb of maqam Kurd. Thus, some distinguish between the two versions of the note Eb by referring to the lower one as Nahawand and the higher one as Kurd.

20. The derivation of the name ʿAjam ʿUshayran (BBb) can be explained as follows. ʿAjam is the note Bb and also the name of a mode which centers on Bb. ʿUshayran is the name for the note AA. One of the lower strings on the Arab lute, the *ʿūd*, is tuned to this note. BBb is played by pressing the first finger on this string; thus, it is the ʿAjam which is played on the ʿUshayran string, i.e., ʿAjam ʿUshayran.

21. In his descriptions of the various maqamat al-Khulaʿi also uses *aradī* in order to designate notes in the lower octave, e.g., *aradī* Shuri for the note an octave below the note Shuri (1904:42). *Aradī* literally means "situated on or near the ground."

22. The terms *qarār* and *jawāb* have also been used in other contexts. For example, they have been used to refer to the tonic and octave notes, respectively, of a given mode. They are also used to refer to the notes on either side of a given mode's central octave. Thus, in maqam Rast, whose central octave is C to c, the *qarār* (or the plural, *qarārāt*) indicates the notes C and below; the *jawāb* (or the plural, *jawābāt*) indicates the notes c and above.

23. This note was called Nahuft or Nahaft by many early modern-period theorists (see al-Hilu 1972:70 who gives the latter spelling).

24. A *nāy* is "tuned" to that note which is produced when all but the last (the lowest) of the seven finger holes are closed.

25. There are seven fundamental notes and seven *ʿarabāt/ansāf* per octave. When Busalik is presented as E natural and Mahur as B natural, then these fourteen notes correspond to the twelve semitones of Western music plus the two half-flats, E-b- and B-b- (Powers 1980 v.6:424).

26. These notes are also referred to as *nīmāt ‘arabāt* (s. *nīm ‘arabah*) and *tīkāt ‘arabāt* (s. *tīk ‘arabah*) (see Shihab al-Din, ibid.:13).

27. *Nīm* and *tīk* are Persian words meaning "half, lower" and "elevated, raised, larger", respectively (al-Faruqi 1981:240 and 369; see also al-Khula‘i 1904:46).

28. This was true during the early years of the modern period (for which we have Mashaqah as a source) and is also true in the present day. Mashaqah indicates that the note which we now equate with E natural was used in nineteen of the ninety-five modes he discusses; the note E half-sharp was used in only a single mode (see his description of the mode Ramal; 1899:729). In the present day, E natural occurs as a primary note in a small number of maqamat (for example, Hijaz Kar, Busalik, Rast transposed to G) while E half-sharp is seldom if ever used (perhaps the only occasion being when it is used as a leading tone in maqam Sikah or Huzam transposed to F half-sharp).

29. D'Erlanger (1949) describes seven modes, all of which are performed only rarely, which include the note F=/= when in root position: Yakah (p.118), Husayni ‘Ushayran (p.132), Nihuft (p.142), Tarz Jadid (p.150), Farahnak (p.162), Bastah Isfahan (p.166), and Sultani ‘Iraq (p.262). al-Shawwa (1946) adds the following rare modes to this list: Shawq Awar (p.32), Isfahan (p.67), Nawa (p.67), Humayun (p.68) Nishaburk (p.74), and Zirkulah (p.92).

30. Comparing Mashaqah's descriptions of the maqamat with those of present-day writers, it is clear that a process of simplification has occurred over the last hundred or so years with respect to the number of pitches used. This is a significant phenomenon that needs to be considered on its own. However, it would be a mistake to view the smaller number of pitches used in the present day as a reflection of the essential nature of the twenty-four-tone scale.

31. al-Sabbagh claims that the seven half-sharps are not used in modern-day performance; i.e., C=/=, D=/=, E=/=, F=/=, G=/=, A=/=, and B=/= (see Appendix 6).

See also Touma 1977,36-38 where he rates the 48 + 1 notes of the two-octave general scale as recurring either frequently, less frequently, or rarely. The ten *nīmāt* and *tīkāt* are all rated as recurring rarely.

32. See Ronzevalle's discussion of the ancient Greek and medieval Arab concepts of the two-octave scale, called *al-jam‘ al-tāmm* in Arabic (1899:220 n.1).

33. Mash'al and al-Jabaqji adopt this name. Salah al-Din's c. 1947 work, entitled *al-Būṣalah al-Mūsīqiyyah*, includes two additional examples of a musical compass. These are modern versions of the earlier examples; devised by Salah al-Din, himself, they contain the standard two-octave range.

CHAPTER III: ADOPTING WESTERN SOLFEGE AND STAFF NOTATION

While continuing to use the Arabic/Persian note names, nineteenth-century musicians and theorists began to adopt an additional system for naming pitches, Western solfege, and a new system of notation, Western staff notation.

Western solfege and notation first entered the Arab Middle East through schools of Western military music such as those founded in Egypt from 1824. Staffed initially by European musicians, "the graduates of these schools formed military bands ... [and] performed both Western military music and Arab music adapted for this kind of ensemble" (el-Shawan 1985:143). After the Cairo Opera House was inaugurated in 1869 the use of solfege and notation was expanded: "yearly seasons of Italian opera, classical ballet, and symphonic music [were presented] by local and visiting orchestras" (ibid.:144). In addition, solfege and staff notation were used in the teaching of Western instruments (especially piano) among the general population.

Among the sources for the present study, the earliest examples of indigenous use of solfege and staff notation for Arab music occur in Dhakir (1895, quoted in al-Khula`i 1904:33) and al-Khula`i (1904: following p.199). Dhakir assigns solfege syllables to the fundamental notes and *`arabāt*/*anṣāf*. al-Khula`i includes two Arab songs transcribed in Western notation. During the twentieth century these two systems have become pervasive not only in Arab theory books but also in the teaching and performing of Arab music.

The adoption of these two systems was in keeping with the commonly held perception that Western music was a more highly evolved music tradition than Arab music, and that Arab music needed to embrace the scientific foundations which helped Western music achieve its advanced state.

A. An Additional Set of Note Names: Western Solfege

In order for Western solfege to be adopted into Arab music a number of adaptations and decisions had to made. These were not without points of conflict. Perhaps the most fundamental difference between the two systems is the understanding of what constitutes the "natural" scale. In the Arab world, the "natural" scale has two notes which are not part of the Western tonal inventory: the third lies between Eb and E natural; the seventh lies between Bb and B natural. The Arabic/Persian names for these notes, "Sikah" and "Haftkah" (later superceded by "Awj"), emphasize the fact that these notes are the natural "third position" and the natural "seventh position" of the Arab scale. Solfege, on the other hand, presupposes that the third and seventh are both "natural" in the Western sense of major third and major seventh.

If solfege were to be used, new terminology was needed to name the notes peculiar to Arab music, i.e., Sikah, Awj, and the *nīmāt/tīkāt*. The nomenclature which was developed maintained the Western orientation inherent in the solfege system as a whole: as the Arab Sikah was lower than E natural, it had to be "flat." It was not, however, as flat as Eb. Since Sikah stood roughly half way between E and Eb, it came to be called "mi half-flat." Similarly, Awj was named "si half-flat". Interestingly, the terms mi and si "half-flat" have been accepted as being synomymous with "Sikah" and "Awj", even though the notes in question are viewed indigenously, not as a variety of "flat," but rather as "natural." In accepting Western solfege (and Western notation), Arab musicians accepted an "etic" view of their scalar material.

The term which was developed for this new concept of "half-flat" is indicative of the dual roots of the concept: "half-flat" came to be translated as *niṣf bīmūl* (colloquially, *nusṣ bīmol*) where *bīmūl* is the French word for "flat" (i.e., *bémol*) and *niṣf* (or *nusṣ*) is the Arabic word for "half." Appropriately, then, we have a bilingual term for this "etically" conceived phenomenon. Similarly, the half-sharp came to be called *niṣf dīyaz* (*dīyaz* being the French word for "sharp"; i.e., *dièse*). An early example of the use of these two terms occurs in al-Antuni (1925:4).

Solfege was not borrowed in isolation. Rather it was part of a larger body of Western musical practices which were adopted with enthusiasm, including Western notation, Western terminology, Western instruments, and Western methods of teaching. Herein lies a second difference between the indigenous Arabic/Persian note names and solfege: the former was a part of an orally transmitted musical tradition (indigenous attempts at notation systems were never widely adopted). The latter was part of a tradition based on the writing and reading of music.

These and other differences between the indigenous Arab and the Western systems were obviously considered insignificant when weighed against the benefits that solfege and other aspects of Western music culture were felt to offer. Significantly, Arab musicians today live with the "Sikah" vs. "mi nisf bimul" contradiction and the "oral" vs. "written tradition" contradiction without any feelings of conflict. (The extent to which solfege and a staff notation have supplanted the previous indigenous traditions is discussed below.)

One of the decisions that had to be made in order for Western solfege to be applied to Arab music was how the two systems would be linked together. In the early years two approaches were followed, one in which Yakah was called "re" and Rast "sol", the other in which Yakah was called "sol" and Rast "do." (In Arabic, the solfege syllables are *dū*, *ray*, *mī*, *fā*, *sūl*, *lā*, and *sī*.)

re	Yakah	sol
mi	'Ushayran	la
fa	Kawasht	si
sol	Rast	do
la	Dukah	re
si	Busalik	mi
do	Jahargah	fa
re	Nawa	sol
mi	Husayni	la
fa	Mahur / Nihuft	si
sol	Kirdan	do
etc.		etc.

The earliest of our sources from the modern period, Laborde (1780:436-439), basing his statements on the authority of M. le Baron de Tott (see Chapter II), assigns "Rasd" [sic] the solfege syllable "ut", "Douga" [sic] "re", etc. Ronzevalle, in his 1899 critical edition of Mashaqah's work, adds a chart of his own (p.298) in which the full two-octave gamut is assigned solfege syllables along the same lines: Yakah is "Sol", Rast is "Ut", etc. (this chart is reproduced in al-Khula'i 1904:35 and in Rouanet 1922:2752 [1]). In the following passage Ronzevalle acknowledges that "Yakah as sol" was a point of controversy in his day (al-Khula'i quotes this passage virtually verbatim; 1904:36):

> Someone asked us the reason why we placed the note "sol" opposite Yakah when it is known that the first note of the European scale is, on the contrary, "do" (also called "ut"). We answered that all the notes are but measurements and ratios; nothing prevents us from starting with any note so long as we maintain precisely the measurements and ratios between the fundamental notes and the quarter notes. Therefor, if you choose to express the Arab scale in terms of the European scale (i.e., "do, re, mi, fa", etc.) [it is] on the condition that you maintain

> the ratios, as I have said. Except that, this choice, we would not find it agreeable if it does not agree with the reality of the situation; for Yakah, in terms of its position and its frequency ("number of vibrations"), it is close to the European "sol" and not "do." (Ronzevalle 1899:299)

In the early years of the modern period, however, it appears to have been just as common (perhaps even more common) to assign Yakah, not "do" as Ronzevalle suggests, but rather the solfege syllable "re." (Rast is thus "sol".) Muhammad Shakir, in his book Ḥayāt al-Insān fī Tardīd al-Alḥān (1895), includes a chart (reproduced in al-Khula'i 1904:33) in which this approach is followed. "Yakah as re" continued to have supporters well into the twentieth century as is evidenced in three works from the 1930's and 1940's: While not using solfege per se, the report of the Institute of Oriental Music (Cairo) in the 1932 Congress publication (Recueil 1934:530ff.) uses Western staff notation in which Yakah is assigned the value of D (or re), i.e., the first space below the last line of the treble clef. al-Shawwa (1946) and D'Erlanger (1949, but written before his death in 1932) were of the opinion that "Yakah as re, Rast as sol" was the dominant approach of their time. al-Shawwa wrote,

> It is known among the followers of the art in the East and the West that for writing the Eastern modes [al-maqamat al-sharqiyyah] in the symbols of Western notation, [we] designate the note Rast with the symbol "sol" and the note Dukah with the symbol "la", etc. But the Congress on Music which met in Egypt in 1932

> deemed it appropriate that the note Rast should be designated by the symbol "do" instead of "sol" as it is known and commonly used by one and all, and the note Dukah should be designated by the symbol "re" instead of by "la", etc., even though most of the Eastern countries have not abandoned writing the Eastern modes in the first fashion ... (1946:144)

al-Shawwa then proceeds to give the main maqamat in Western notation, including two transcriptions for each maqam, one in which Rast is "sol," the other in which Rast is "do," "in order to avoid complication and confusion" (ibid.).

D'Erlanger acknowledges a Turkish origin for the association of Yakah with "re." Indeed this is still the practice in Turkish music in the present day: "in imitation of the Turks ... the Arab musicians who use European notation attribute ... to the lowest degree of their musical scale the symbol 're,' positioned below the first line of the staff, thus making the central octave, the Rast octave, start from the note 'sol'..." (1949:10). [2]

Villoteau's transcriptions, published over a century earlier (1826:18), offered a third approach. He assigned to Rast the note DD on the middle line of the bass clef (Yakah is "la"). His is, however, the only work among those surveyed to follow this approach.

Whatever support Rast as "sol" enjoyed during the first half of the 20th century, it eventually began to lose out to Rast as "do". Ronezevalle's observation that the latter more closely reflected "reality" seems to have been the reason for the shift. D'Erlanger, writing some 30 years after Ronzevalle, commented,

> [Rast as sol], however, renders the notes of the Arab scale a fifth higher than their real intonation. This key seems to have been adopted only because it facilitates writing in that it generally avoids the use of ledger lines ... If we [i.e., D'Erlanger, in his 1949 work] have chosen the "do" of the first ledger line below the staff [for Rast], it is because this notation seemed to us to approximate the habitual tonality adopted by the Arab singers. (1949:11)

Ultimately, Rast as "do" became the sole approach for applying solfege to Arab music.

B. The Introduction of Western Notation into Arab Music

The adoption of Western notation into Arab music culture cannot be viewed as being separate from the adoption of Western solfege, for it is by means of solfege that one reads Western notation in the Middle East. However the adoption of Western notation did have its own history to a certain extent. While Western scholars of Arab music used staff notation in their research from a very early date (see Villoteau 2nd ed. 1823 and 1826), al-Khula'i was one of the first among the Arab scholars to give musical examples in this form (1904, at the end of the book, no page number). In his two examples, al-Khula'i employs only the symbols of standard Western notation, responding to the presence of any half-flats and half-sharps only by indicating the name of the maqam at the beginning of the example (D'Erlanger discusses this point; 1949:10). Thus one of his examples, which he has indicated to be in maqam Yakah (a mode in which the third is half-flat), appears in the transcription to be in a major mode.

al-Shawwa tells us (1946:6) that it was not until 1914 that special symbols (called *`alāmāt al-taḥwīl*) were developed for indicating the notes peculiar to Arab music. He credits this achievement to Manṣūr `Awaḍ of Cairo who in that year published a small book which proposed the following symbols: -b- (♭) for *niṣf bīmūl* or half-flat, and /-/ (♯) for *niṣf diyaz* or half-sharp (al-Shawwa 1946:144-5; D'Erlanger 1949:406 gives the title of `Awaḍ's book as *Jadwal tawqī` sullam maqāmāt al-mūsīqī s-Šarqiyyah `alā `alāmāti n-nūtah al-Afranjiyyah* i.e., A Chart for Recording the Scale of the Eastern Maqamat in the Symbols of Western Notation. al-Shawwa further reports that the 1932 Congress invented two new symbols for the same purpose (ibid.:145). The Congress report actually includes four "new" symbols (in addition to the normal sharp and flat signs) but attributes their origin to a group of French scholars:

> Arab music has been printed for a long time in the same manner as European music. Only the notation of the sharps and flats representing the quarter tones has varied a little. The members present at the Committee [on the Musical Scale] have adopted the system recommended by Mr. Stern in the manner of Mr. Grassi and the

> Institut de Phonetique de Paris and the Musee de la Parole of the University of Paris: three sharps of one, two, and three vertical lines (=/=, =//=, and =///=); plus one reversed flat (d), one ordinary flat (b), and one flat with a short vertical line to its left ('b) ... (Recueil 1934:597)

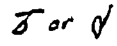
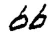
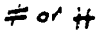
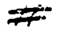
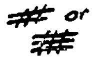
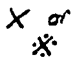
In a series of footnotes, these six symbols are explained as follows (ibid.):

≠: to raise the pitch by 1/4 of a tone
♯: to raise the pitch by 1/2 of a tone
⋕: to raise the pitch by 3/4 of a tone

d: to lower the pitch by 1/4 of a tone
♭: to lower the pitch by 1/2 of a tone
'♭: to lower the pitch by 3/4 of a tone

al-Hilu, on the other hand, attributes the invention of the half-flat and half-sharp symbols to the Turks (al-Hilu 1972:38). Whoever the rightful inventor, the twenty-four notes of the Arab scale could now be individually transcribed onto Western staff notation.

Subsequent Arab writers commonly list all or most of the following symbols (see Fatah Allah and Kamil 1972:9; 'Iffat c.1980:9; Farah 1974:52; Jabaqji 1976:23; al-Hilu 1972:39; 'Arafah and 'Ali 1978:16; Muhammad 1984:1; Mash'al c.1980:32; etc.):

symbol	Arabic name	English name	function
	niṣf bīmūl	half-flat	lowers the pitch 1/4 step
	bīmūl	flat	lowers the pitch 1/2 step
	bīmūl wa niṣf	flat and 1/2	lowers the pitch 3/4 step
	dūbl bīmūl	double flat	lowers the pitch one step
	niṣf dīyaz	half-sharp	raises the pitch 1/4 step
	dīyaz	sharp	raises the pitch 1/2 step
	dīyaz wa niṣf	sharp and 1/2	raises the pitch 3/4 step
	dūbl dīyaz	double sharp	raises the pitch one step
	bīkār	natural	returns the pitch to its "natural" position

Of these symbols, only the ones for flat and sharp, half-flat and half-sharp, and natural are commonly used (this excludes the three-quarter sharps and flats, and the double sharps and flats).

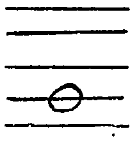
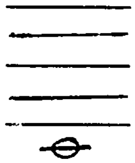
As for the two varieties of half-flat and half-sharp, some follow the 1932 Congress' recommendations and use "d" and "=/=" (`Arafat and `Ali 1978; `Arafah 1976; Mash`al 1979:21; Salah al-Din 1950; Qatr n.d.:47). Others follow `Awad's creations and use "-b-" and "-//-" (Farah 1974; al-Hilu 1972; al-Faruqi 1981:117). Most common, however seems to be a mixture of the two systems: "-b-" for half-flat and "=/=" for half-sharp (`Iffat c.1980; Mash`al c.1980; Fatah Allah and Kamal 1972; Jabaqji 1976; Muhammad 1984; Shurah 1983; Racy, unpublished transcriptions). [3]

The fact that Western notation is written from left to right while the Arabic language is written from right to left poses a problem when songs with texts are to be transcribed. In the early years when staff notation was first being introduced into Arab music, opinions varied on how this conflict should be handled. The problem was most pressing for Christian missionaries as they wanted their congregations to be able to read from hymnals with as little difficulty as possible. As a result, many song books were published in the first part of this century in which Western staff notation was used after it had been adapted to read from right to left. Mabādī' Mūsīqī Gharbiyyah wa Sharqiyyah (Fundamentals of Western and Eastern Music) by Father Buias al-Ashqar al-Antuni (published in Beirut in 1925) is an example of this approach. [4]

Although this method of adapting Western notation never really caught on, its use was still being considered as late as the 1930s: it was discussed but ultimately rejected by the members of the Committee of the Musical Scale at the 1932 Congress (Recueil 1934:597-598). The examples we have of its use remain as historical evidence of the conflicts which occurred when the Western form of notation was applied to Middle Eastern music.

Today, Arabic text is written beneath the melodic transcription, each syllable written separately from right to left in an overall transcription which proceeds from left to right. [5] In order to assure that the reader comprehends the text, a normal (right to left) version of the text is provided at the end of each transcription.

Two decisions remained in order for the Western staff notation to be adopted into Arab music. One involved settling on where the Arab notes would fall on the staff. As described above in the discussion on solfege, two methods of transcription were common in the early years:

Rast as  and Rast as 

The former remained a common alternative through the 1940's as is evidenced in the Institute of Oriental Music's transcriptions within the 1932 Congress publication (Recueil 1934:529ff.), and in al-Shawwa's (1946) and D"Erlanger's (1949:10-11) statements attesting to its continued popularity (see p.130 above). In time, however, the latter became the sole method for transcribing Arab music onto staff notation. [6]

The second decision involved the use of the different clefs. While the range of the violin (a major instrument in Arab music since the nineteenth century) lies within the lines of the treble clef, the range of the ʿūd lies, for the most part, within the lines of the bass clef. Use of the bass clef, however, was never given serious consideration. Arab music has restricted itself to using only the treble clef. Yakah (GG) is written below the second additional leger line beneath the treble clef's staff. Jawab Nawa (g) is written above the highest line of this staff. This is irrespective of the fact that different instruments play the notated line in different octaves (see discussion on musical instruments in Chapter II, section D).

C. The Spread of Solfege and Western Notation

Whereas Arab writers in the nineteenth century had discussed Arab music in its own terms (i.e., using only the Arabic/Persian names to refer to the notes), it became more and more common in the early years of the twentieth century to discuss the music in the terms of solfege and Western notation. We see the early stages of this shift in the works of al-Khula'i and al-Shawwa. al-Khula'i (1904) discusses the notes of Arab music using only the Arabic/Persian system of note names. When presenting the maqamat he continues to use these names but occasionally adds the name of the Western scale that he feels most closely resembles the Arab maqam. For Bayyati (D E-b- F G A Bb c d), for example, he adds "La mineur" (p.43). Then at the end of his book he includes two songs transcribed in Western notation. al-Shawwa begins his

1946 work with a passage which expresses the new attitude toward solfege and notation:

> Music is a science and an art. As a science, it is one of the natural sciences based on a mathematical foundation and distinguished by a succession of steps/notes and melodic intervals, and the building of modes, and the knowledge of rhythm, and melody, etc.; and the science of musical symbols - al-nūtah. (1946:6; emphasis added).

After this introduction al-Shawwa proceeds to write about Arab music using the Arabic/Persian note names exclusively. It is only at the end of the book that he teaches the elements of solfege and Western notation and gives the main maqamat in Western notation (p.158ff.). That solfege and Western notation are essential to Arab music is. in al-Shawwa's work, just an idea, one which has not been fully incorporated. In other works written around the same time the idea was already being realized.

The spread of solfege and Western notation was aided by three new developments, all the result of the new interest in Arab music among the educated urban classes: 1) the publishing of newly established journals devoted to Arab music; 2) the founding of numerous schools and institutes of Arab music throughout the Middle East; and 3) the publishing of theory and method books devoted to Arab music and Arab instruments.

The first Arabic music journal was Rawḍat al-Balābil

(The Garden of Nightingales), a monthly from Cairo, editted by Iskandar Shalfun. Beginning with the third issue (December, 1920), the journal presents a series of articles which teach the fundamentals of solfege and Western notation. Another Cairo based journal, al-Hifni's *al-Mūsīqá* (later called *al-Majallah al-Mūsīqiyyah*/*La Revue Musicale*) began a similar series of articles in its first issue (May, 1935).

The first music schools were established in the first decades of the twentieth century in Cairo, Beirut, and then Damascus (see p. 27 above). "Ta`līm bil-nūtah" (learning through Western notation) became the norm at these institutions. Among the required classes in many of these schools is a course called "solfege sharqī," i.e., Eastern or Oriental solfege. In this class the student is taught to sightread examples of Arab music in Western notation; i.e., the student must sing the notated melody line using the solfege syllables do, re, mi, fa, sol, la, and si.

Theory and method books which based their presentations on solfege and Western notation also began to appear, usually written by teachers from the newly founded music schools. An early example is al-Hifni's *al-Mūsīqá al-Naẓariyyah* (Music Theory) first published in 1938. Since solfege and Western notation were not as yet widely understood in the Middle East, these books had to begin with introductions to these new systems. Only after such introductions (often filling the entire first half of these books) would the sections on

Arab music begin.

al-Hilu's al-Mūsīqá al-Naẓariyyah (1st printed in 1961; reprinted in 1972) offers a full-fledged example of this phenomenon (al-Hilu, it will be remembered, was a teacher of the National Institute of Music at Beirut). A brief review of the contents of the initial sections of this work shows the body of knowledge that was now perceived as a prerequisite for the study of Arab music. After initial remarks on the nature of musical sound, al-Hilu introduces the solfege system. The following section begins with an explanation of the lines and spaces of the treble clef (called mudarraj in Arabic) and the naming of the same in terms of solfege syllables. [7] Then come the various note values (the whole note, half note, quarter note, eighth note, sixteenth note, thirty-second note and sixty-fourth note, known in Arabic by the French names: rūnd (la ronde), blānsh (la blanche), nawār (la noire), krūsh (la croche), dūbl krūsh (la double croche), trībl krūsh (la triple croche), and kadrūbl krūsh (la quadruple croche). (The last two are used only rarely in Arab music.) Then the student is taught to write these notes on the staff, with an explanation of additional ledger lines. Next comes an explanation of the bass (F) clef and the C clef and the different voice ranges, soprano, alto, tenor, bass, etc. with a discussion of which instruments of the Western orchestra read from which clefs. Then comes sections on rests, dotted notes, triplets, the whole steps and half steps in the Western major scale, the Western melodic intervals, and the symbols for sharp and flat.

It is at this point that al-Hilu and others who follow this approach first mention Arab music: after introducing the Western symbols for sharp and flat, they then give the additional symbols necessary for Arab music's half-flats and half-sharps. This is, however, only a brief lapse for immediately after this the discussion of Western music resumes.

al-Hilu proceeds by discussing Western scalar theory, including the chromatic scale, the cycle of fourths and fifths, the major scale as it occurs from different starting notes, the harmonic and melodic minor scales, and the minor scales as they occur from different starting notes. This is followed by the symbols for repetition including the da capo sign, symbols for staccato, grace notes, and trills signs, metronome signs, and the Italian names for the various tempi and dynamic markings. al-Hilu then closes this part of the book with a discussion of measures, time signatures, and the hand motions for conducting in the different time signatures. Having acquired this body of knowledge, the student is now ready to study Arab music.

This approach, of beginning one's Arab music studies by first learning the principles of Western notation and Western scalar theory, has become increasingly common since the

1920s. This explains the emphasis on this material in the first issues of newly founded music journals and in the first chapters of virtually all Arab theory books from this period to the present-day. [8]

This approach to Arab music is even more pronounced in the case of method books and anthologies of vocal and instrumental pieces. These books are themselves a product of the Western approach to music education since they rely solely on Western notation for presenting their material. Thus, their first pages are obliged to introduce the particulars of this notation system. Such books usually make only the briefest mention of the Arabic/Persian note names (see Jabaqji 1976:49; 'Arafah and 'Ali 1978:15-18; and others). Over the last fifty years the number of method books and books of music transcriptions has increased dramatically so that large sections of the total Arab music repertoire are now available in published transcriptions. Two early examples of books of instrumental pieces were edited by 'Abd al-Mun'in 'Arafah. Dirāsat al-'Ūd (The Study of the 'Ūd), co-edited by Safar 'Ali, was first published in 1942 in Cairo. This book was well received and has continued to be a popular work up to the present day, as is evidenced by the number of editions or printings that have appeared: the second in 1945, the third in 1950, a fourth in 1954, (there is no information on the date of the fifth), the sixth in 1978, and the seventh (mislabeled the sixth) in 1984.

Dirāsat al-'Ūd contains transcriptions of 17 *basharif* (s. *bashraf*), 37 *samā'iyyāt* (s. *samā'ī*), one *dārij*, and 11 *dawālīb* (s. *dūlāb*). These are all instrumental genres. This book was soon followed by a second entitled *Ustadh al-Musiqa al-'Arabiyyah* (The Teacher of Arab Music), this one edited by 'Arafah alone. This book has gone through three editions (or printings) so far, 1944, 1945, and 1976. *Ustādh al-Mūsīqá al-'Arabiyyah* contains transcriptions of 17 *lūnjāt* (s. *lūnjā* [*longa*], 6 *taḥmīlāt* (s. *taḥmīlah*), and 12 *taqāsīm*.

A number of other books of music transcriptions have followed the above works. Noteworthy are those of 'Abd al-Rahman Jabaqji. Jabaqji, of Aleppo, Syria, has published separate volumes of transcriptions of the songs of Umm Kulthum (2 v.s), Wardah (1 v.), 'Abd al-Halim Hafiz (1 v.), and of the songs and instrumental pieces of Muhammad 'Abd al-Wahhab (2 v.s). He has also published a method book, *Ta'līm al-'Ūd* (Teaching of the *'ūd*)(1st edition in 1976, 2nd edition in 1982) which includes over 135 transcriptions of both vocal and instrumental pieces. Other publications have appeared devoted specifically to *muwashshaḥāt* (s. *muwashshaḥ*), *ṭaqāṭīq* (s. *ṭaqṭūqah*), and to *adwār* (s. *dawr*), three vocal genres.

D. Replacing Indigenous Traditions?

This section assesses the extent to which solfege and Western notation have replaced prior-existing traditions, i.e., the system of Arabic/Persian note names and the oral/aural method of transmission and performance.

D.1. Solfege

In the twentieth century, support for solfege and Western notation grew to such an extent that some even called for an end to the use of the Arabic/Persian note names. In the new music schools, especially, the traditional names were considered too difficult for the new breed of students. al-Hilu remarks students learn the single-syllable solfege names in ten minutes, but that it takes days and even months for them to memorize the traditional note names (many of which are Persian rather than Arabic) ([1961] 1972:76). The idea appears at the 1932 Congress when members of the Committee on the Musical Scale were asked to consider four questions, one of which was, "Could we not simplify the names of the degrees of the Arab scale?" (Recueil 1934:83). The Committee's response was: "All of the members present declare that there is no reason to change these historic names ..." (ibid.:597). In the 1960s, however, a similar proposal met with approval: At an extended conference of Arab music scholars and performers held in Cairo from 1961 to 1963, the following was included among the recommendations passed by those in attendance: "calling the musical degrees of the Arab scale by the names of the steps of the Western musical scale [i.e., solfege], adding to these the Western chromatic symbols [#, b, etc.], *leaving aside their Arabic names like nīm and tīk, etc.*" (*al-Ḥalqah Thāniyah* 1964:14; emphasis added). From this statement, it is not clear the extent to which the conference's members wanted to do away with the Arabic/Persian note names. While the third category of names, the *nīmāt* and *tīkāt*, would be eliminated in favor of the solfege syllables (with the addition of the terms *niṣf bīmūl* and *niṣf dīyaz*), the fate of the other fourteen names is not specified. A partial answer to this point is provided elsewhere in the conference publication itself, where eight of the fourteen remaining note names are used in a discussion of the tonic notes of the various modes (ibid.:12).

In the 1970s, we find Hafiz and Jabaqji carrying the idea to its logical conclusion. Hafiz (1971:186) calls for "the elimination of the [Arabic/] Persian [note] names, and the use of all the names of the notes of Western music; ... for example, 'do' instead of the word Rast and 'sol' instead of Nawa, etc." Like al-Hilu, Jabaqji says that the system of Arabic/Persian names is too difficult for the students, that it keeps them from continuing their music studies; therefore he proposes that all the traditional names be eliminated in favor of Western notation and solfege. He gives as an example, "... do# instead of Shahnaz or Zirkulah and sol-b- instead of tik Hijaz" (1976:50).

It should be remembered that the naming of the 48 + 1 notes, each with their own specific name, was one of the "advances" of the modern period's system of nomenclature (for example, C# was named Zirkulah while c# was named Shahnaz). At the beginning of the modern period, having independent names for the same note in different octaves was apparently viewed as an invaluable tool. Now that the music was being written down, this feature came to be regarded, by some, as a burden! (In the present-day period, this shift back to a system in which the note names duplicated at the octave--C# and c# are both called do diyaz--would have profound consequences regarding the conceptualization of the individual modes; see Chapter X, section E.)

Subsequent to Jabaqji's proposal, a number of works appear which use only solfege and Western notation, without even introducing the Arabic/Persian note names. Nasir's Dirāsat al-Qānūn (1980) is an example. [9] Fatah Allah and Kamil have also virtually cast aside the traditional Arabic/ Persian note names in their al-Manhaj al-Hadīth fī Dirāsat al-ʿŪd (The Modern Method for the Study of the ʿŪd), a book which is widely used at the Cairo music institutes in the present day. These authors never introduce the traditional names and use the same (with but one exception) only when discussing the tuning of the open strings of the ʿūd; these discussions require the use of only five of the forty-nine note names (1982:23-30).

In May and June 1987, I conducted a number of interviews in Cairo to find out the extent to which the traditional Arabic/Persian note names are still used. The responses from a few of the interviews are given below:

One individual, born in 1920, has taught 'ud privately since his graduation from the Royal Arab Music Institute in 1941. When asked about the traditional names he reeled off the following nine names: Rast (C), Dukah (D), Kurd (Eb), Sikah (E-b-), 'Ajam (Bb), 'Iraq (BB-b-), Husayni (A), Awj (B-b-) and Hisar (G#/Ab). He could not immediately think of the names for E (Busalik), B (Mahur), or c (Kirdan) and others. He commented, "I do not know all these. They are important to someone who is studying and are available in the book Dirāsat al-'Ūd [by 'Arafah and 'Ali]; anyone can go and look them up. But to the musician they are not very important. It is not necessary to memorize them" (personal communication 5/30/87). Of the nīmāt and tīkāt names he adds, "No one uses these names ever! Most of them are not even played." Like the vast majority of present-day Cairo musicians, this individual is fluent in the use of Western solfege. He can sing any song or instrumental composition he knows using solfege syllables (in these moments, Eb, E-b-, and E are all named "mi"; there is no system for varying the solfege names to reflect the variety of note--flat, half-flat, etc.--that is being used).

Qadri Surur, born in 1947, received his Ph.D. in Arab music from the Kulliyat al-Tarbiyyah al-Musiqiyyah, Cairo (the Faculty of Music Education, a branch of Helwan University) in 1986. He teaches *nāy* and first-year Arab music theory at the Kulliyah and also plays *nāy* professionally. In his theory class Surur teaches the forty-nine note names. In the final examination given in May 1987, the first-year students were asked to name ten notes that were transcribed on the Western G-clef staff. Surur reports that the students did fairly well in this question but that many missed the two notes which were from the *nim* and *tīk* category. In the school curriculum, more emphasis is placed on the students' learning solfege than on their learning the traditional note names. All students at the Kulliyah are still required to take the class in "solfege sharqi" mentioned above (p.138).

As for his fellow professional musicians not connected with the music institutes, Surur comments that they do not use many of the traditional note names. "They do not know Hisar (Ab); they do not use *nīm* and *tīk*. We use 'fa *niṣf dīyaz*' instead of nim Hijaz; or else they use 'fa sikah' for 'fa *niṣf dīyaz*' and 'la Sikah' for 'la *niṣf bīmūl*'" (personal communication, 5/15/87). In other words, Sikah has become a generic term for indicating the half-flat and half-sharp positions. In another interview, an electric organ salesman in Cairo told me that the organ he was showing me "gets all twelve Sikah-s per octave"(!). Surur continues, "Musicians will know most of the fundamental note names, the notes of maqam Rast; and violinists and *ʿūd* players will know the names of the open strings of their instruments" (ibid.).

Interviews with professional musicians not connected with music institutes confirm Surur's comments. Many of the note names are not used or even known. The terms *ʿarabah*, *bardah*, and *nīm* and *tīk* exist only in the realm of music theory, i.e., primarily in books and academic institutions.

Among folk musicians (specifically, among performers of the genre called *madḥ* or *madīḥ al-nabī*) both Arabic/Persian and solfege names are used only rarely. *ʿŪd* and violin players might know the Arabic/Persian note names for the open strings of their instruments. *Salamiyyah* or *ṣuffārah* players (these are alternative names for the folk version of the end-blown flute) commonly name only the lowest three positions on each instrument as these act as tonics of the various modes. The first is called "Rast" and the third "Sikah", but the second is called "Bayyati" instead of "Dukah"! (personal communication from numerous *suffārah* players in Cairo, 7/87). Here we see a continuation of the process of replacing the ordinal note names (Yakah, Dukah, Sikah, etc.) with names of prominent maqamat which are based on the note in question. In present-day Arab music there is no mode called Dukah (such a mode did exist at the beginning of the modern period). Thus, it is perhaps inevitable that the note name "Dukah" (D) will be replaced by "Bayyati," Bayyati being the most prominent of the modes based on the note D. However, there is no evidence that this process has begun outside the realm of folk music. (There are modes called Sikah and Jaharkah which are based on the notes Sikah, [E-b-] and Jaharkah [F], respectively, so one might assume that these two note names will remain).

In the face of the solfege system's widespread popularity, it is appropriate to ask whether the Arabic/Persian note names will be able to survive? To this we must answer that, as a whole, the traditional names seem in little danger of disappearing. Indeed, a few authors continue to use the Arabic/Persian names exclusively, completely ignoring the Western solfege (see Mahmud Kamil 1975; see also Muhammad 1984 who uses Western notation extensively but uses the Arabic/Persian names instead of Western solfege). Some introduce solfege in the beginning of their books but then use the Arabic/Persian names instead of solfege when discussing the make up of the individual modes (see al-Hilu 1972). Others give the solfege and Arabic/Persian names side by side (Salah al-Din (1948:81); al-Sabbagh (1950); Mash'al (1979:43).

However, it is clear from the comments of Cairo-based teachers and performers that a number of the individual note names are not used. Most prominent among these are the names of the *nīmāt* and *tīkāt*, musicians preferring to call these notes by their solfege names. We find this to be the case even in some published works: 'Iffat (c.1980:13-16 & 19) names the seven fundamental notes and the seven *'arabat* with the Arabic/Persian names but then refers to tik Hijaz only as "fa =/=." This is, in large part, a function of the fact that most of the *nīmāt* and *tīkāt* are seldom used in practice. Another group of names which are used only rarely, even in the theoretical literature, are those for the notes above Muhayyar (d), for example, Buzrak (e-b-), Mahuran (f), and Saham or Ramal Tuti (g). These notes are often referred to by their solfege names or by adding "jawāb" to the names of the same notes in the lower octave (see Appendix 2).

No matter how strongly some people speak against the continued use of the Arabic/Persian note names, there are a number of specific circumstances where even these people continue to use the traditional names. One is when naming the open strings of the *'ūd*. In the popular Cairo textbook by Fatah Allah and Kamil (1982:23-30), this is the only occasion when these names are employed. A second instance is when one is referring to the various *nāyāt* (s. *nāy*). The seven standard *nāyat* are called Rast (C), Dukah (D), Busalik (E), Jaharkah (F), Nawa (G), Hussayni (A), and 'Ajam (Bb). They are not referred to by the solfege syllables. A third is when people are listing the various modes by their starting notes, for example, "the maqamat whose tonic is Yakah, the maqamat whose tonic is 'Ushayran, etc." The Arabic/Persian names are preferred here since they specify the particular octave that one has in mind. The 1961-63 Cairo conference publication uses the Arabic/Persian note names for this purpose even though they seem to call for an end to these names (see p.143 above). A fourth is when discussing the tonic of transposed modes. When maqam Bayyati, for example, whose tonic is normally re or Dukah, is transposed to sol or Nawa, it is consistently referred to as "Bayyātī Nawā" or "Bayyātī 'alá al-Nawā" (i.e., Bayyati on Nawa), rather than "Bayyātī sol." We find this to be the case even in the work of Jabaqji (1976:86), only thirty-six pages after his call for the abolition of these note names. A last instance where the traditional note names are used is when one is conducting a tetrachordal analysis of the various modes. The Arabic/Persian note names are invariably used to refer to the base note of these tetrachords (see Jabaqji 1983:11; Fahmi 1965:57ff. and elsewhere).

D.2. Western Notation

Since Arab music has become increasingly available and reliant on Western notation, the questions remain, "How widespread has musical literacy become?" and "What percentage of musicians learn pieces through transcriptions as opposed to the traditional oral/aural process?"

Although Western notation has been applied to Arab music since the nineteenth century (initially for military bands), it was not widely adopted until after the 1930s. D'Erlanger, for example, wrote before his death in 1932 that Arab music was still an orally transmitted tradition (1949:10). He did, however, acknowledge that Western notation was becoming more widespread in his time.

Over the last fifty years the role of staff notation has increased substantially. For example, throughout her career, which lasted into the early 1970s, the famed singer Umm Kulthūm had her ensemble rehearse and perform without the use of Western notation. Now in the 1980s, Western notation is used by all the main Cairo performing ensembles, both during rehearsals and at the time of performance. Musical literacy is now a minimum requirement for instrumentalists seeking a career in the "popular" or "main-stream" performance traditions (in the ensembles that accompany the singers Wardah, 'Azīzah Galāl, Dalīdah, Sabāḥ, Muḥammad 'Abduh, etc., and in the radio and T.V. ensembles). It is also a requirement for members of the two Cairo ensembles that perform older music, i.e., Firqat al-Mūsīqá al-'Arabiyyah and Firqat Umm Kulthūm (mentioned on p. 41 above). Because the required levels of musical literacy are so demanding (performances are given and commercial recordings are made often after only one or two rehearsals), it has become virtually mandatory that musicians are products of one of the higher institutes of music which base their teachings on the use of Western notation (the two main institutes in Cairo are discussed on pp. 27 and 37 above; see also el-Shawan 1979:106-107). D'Erlanger's statement that Arab music was still an oral tradition is no longer valid.

This is not to say that musical literacy has become all-pervasive. There are still contexts where oral/aural learning continues to play an important role. For example, musicians who play at parties or at night clubs are required to perform exact-as-possible renditions of the latest hit songs. While the musicians who recorded the original commercial versions performed from staff notation (provided by the composer), other musicians must learn the songs by ear from the commercial recordings. Aural learning is also important in the improvisatory genre, taqāsīm. Young musicians listen to masters of taqāsīm and try to imitate those aspects (melodic content, phrasing, etc.) that they like the most.

However, it is within the realm of folk music that the oral/aural process is most widely found. Among performers of folk music, musical literacy is virtually nonexistent. Musicians have large repertoires which they learn exclusively by the oral/aural method. Significantly, though, these very musicians are now voicing the desire to learn "al-nūtah," i.e., Western notation. Many folk musicians now believe that the ability to read "al-nūtah" is one of the essential tools of a master musician. It would give them, they believe, the ability to play "more accurately, with more precision" ('Umar Ahmad, a Cairo folk musician who plays the 'ūd, personal communication 7/15/84). It is an important indication of the position Western notation has attained in Arab music culture that even those who have not learned to use it have come to view musical literacy as a desirable achievement.

The success with which staff notation was introduced into the Middle East was, in part, a function of the fact that it was not replacing an indigenous system of notation. Thus, there was no conflict between old and new systems. One might, however, expect some degree of conflict to have surfaced between the old and new approaches (i.e., oral vs. written). Surprisingly, though, significant conflict never materialized. Few seemed to regret this aspect of change. Rather, the adoption of Western notation was widely regarded as a necessary step in order to assure the continued vitality, even the very survival, of Arab music (see Chapter I). Among the sources for the present study there is no call for the preservation or reinstatement of the oral process of music transmission. [10]

While the adoption of a notational system into this previously oral tradition did not bring about open conflict, it did result in a number of substantial changes in the nature of Arab music. Most immediate, of course, was a change in the learning process. Teachers, both private and institution-based, came to rely on printed music books. (In Cairo, 'Arafah and 'Ali's *Dirāsat al-'Ūd* played a major role in this regard.) But there were also changes in the performance practice. For example, the culture's perception of a given song's melodic line was significantly altered. When everyone learned a given piece aurally, it was common to have aspects of divergence among the various renditions that resulted. In the Middle East, this difference (plus the differences that result from performance on different types of instruments, i.e., bowed, plucked, blown) combined to create a musical aesthetic that valued heterophony over monophony. Recordings of instrumental music from the period before the introduction of notation (the earliest recordings date from 1904; see especially the recordings of the *nāy* player, Buzari) are remarkable for the extent of heterophony that is present in the performance of one melody line by three or four musicians.

Today, instrumental pieces are, for the most part, learned from notation. There is a standard line that all learn to be the correct rendition of the given piece. In group performances, playing in unison or octaves rather than heterophony has now become the norm. While it would not be fair to place the sole "blame" for this on the adoption of Western notation, the all-pervasiveness of notation in the Middle East has indeed played a significant role in facilitating this development. [11]

Concluding Remarks

The nature of Arab music theory has changed drastically over the last 100 years. The introduction of Western solfege syllables and Western notation, the reliance on the same for teaching and performance, the presentation of Arab music theory only after one has introduced the elements of Western music theory--these are all new elements. A "Western presence" now pervades Arab music and Arab music theory.

Other examples of this "presence" include the general observance within music transcriptions of Western music's order of sharps and flats, even when it is inappropriate for the mode being transcribed. For example, an Arab mode which has Eb and Ab but not Bb (maqam Nahawand : C D Eb F G Ab B c) will often be assigned a key signature of three flats (Bb, Eb, and Ab); the transcriber is then obliged to put a natural sign before every occurrence of the note B in the transcription. On a less obtrusive level, one first learns of Western music's "natural" scale (*al-sullam al-ṭabīʿī*) before learning that this sense of being "natural" has nothing to do with Arab music, for then one is taught that Arab music's "natural" scale has E-b- and B-b- (see p. 124 above).

These new elements have entered Arab musical culture, in part, because of a cultural perception that Western music culture has attained a position of higher development based on "sound scientific principles" that are lacking in Arab music. They were also introduced because they facilitate teaching and learning in the newly established institutionalized settings. Whatever the reason for their appearance, most of the Western elements in Arab music can no longer be viewed as foreign for they are now accepted as integral parts of modern Arab music.

NOTES FOR CHAPTER III

1. Rouanet wrongly attributes this chart to Mashaqah rather than to Ronzevalle. In fact, Mashaqah does not mention Western solfege.

2. Touma also considers "Yakah as re" to be of Turkish origin. He remarks that it was only "after the end of the Turkish domination [that] one replaced in all the Arab world the re corresponding to Yakah with sol ..." (1977:31-32).

3. Collangettes (1904:421-422) discusses two early attempts by Western scholars to develop symbols for indicating the half-flat and half-sharp pitches. Parisot proposed the use of plus and minus signs while Collangettes himself suggested using the diamond shaped notes that are employed in the printing of plain chant. The latter are used in Rouanet 1922. Touma uses minus and plus signs when presenting the general scale (1977:35).

A few theorists have devised additional symbols in order to notate small variations of pitch (smaller than a quarter tone) (see Jagaqji 1976:101; al-Mahdi 1972:37-38; Nasir 1980:10; Mahfuz v.3:260 and al-Kurdi 1984:307).

4. This book and this whole phenomenon was introduced to me by A. Jihad Racy.

5. The difficulties inherent in reading a song text transcribed backwards, syllable by syllable, are enhanced in Arabic because of a peculiarity of Arabic orthography; namely, a letter which appears in the middle of a word is written differently than the same letter when it appears at the end of a word. Thus, the word "biyhibb" (meaning "he loves" in Egyptian dialect) which as written " بيحب ", becomes "بي ح ب" when written syllable by syllable. When the syllables are written from left to right, the result (ب ح بي) little resembles the original word (this example is found in Qa' n.d.:200-201).

6. Arab theorists and musicians commonly recognize that the note Rast corresponds to the note C in Western music. The note A, then, closely corresponds to A 440, i.e., A having a frequency of 440 cycles per second. The theorist, Arian, for example, gives the note Husayni (A) as having a frequency of 879 cycles per second (1924:164), virtually matching A 440 in a higher octave (440 X 2 = 880). Ronzevalle (1899:298) and the Committee on the Musical Scale at the 1932 Congress (Recueil 19934:595) both use A = 435 cps as a standard (see also al-Khula'i 1904:35). In the realm of practice, nāy makers cut their nāyāt so that the note A closely corresponds to A 440.

While recognizing a standard which closely matches A

440, musicians and singers often deviate from this standard in practice for a variety of reasons. Most commonly, the pitch may be lowered to accomodate a singer's voice. String players (*ʿūd*, violin, cello, etc.) usually respond by lowering the pitch of their strings. *Nāy* players will choose another *nāy* (the standard set of seven *nāyāt*--pl. of *nāy*--has separate instruments tuned to C, D, E, F, G, A, and Bb). In preparation for occasions when the chosen pitch falls between these notes, *nāy* players commonly order *nāyāt* which are tuned a little above and a little below standard pitch. (*Qānūn* players generally do not retune; rather, they transpose up or down one or more strings.)

The Arab Music Ensemble in Cairo has adopted a lower tuning as its standard: the ensemble tunes a whole step below A 440 (i.e., the G string on the ʿud or violin is tuned to F but the note is still called Nawa). This tuning is referred to as the "small tuning" (*ṭabaqah saghīrah*); the higher tuning is referred to as the "large tuning" (*ṭabaqah kabīrah*). The lower tuning is so common that Cairo *ʿud* makers began making larger *ʿūd*s to accomodate the lower pitch.

Recordings of the singer Umm Kulthum reveal that she started her career singing at a pitch closely matching A 440. Later in her career she sang a whole step below this pitch. Finally, at the end of her career, she frequently sang a minor third below pitch; i.e., the note Rast (C) was often tuned to AA.

This lack of fixed pitch in performance has been recognized by a number of writers (Ronzevalle 1899:299-300 n.2; al-Khulaʿi 1904:36, a passage based on Ronzevalle's comments; Rouanet translates al-Khulaʿi's passage, 1922:2751 n.1; D'Erlanger 1949:109-110; Touma 1977:32).

7. It is important to note here that while we in the West use the letters of the alphabet (a to g) to designate the notes on the musical staff (thus our "*e*very *g*ood *b*oy *d*oes *f*ine" and "f-a-c-e"), this is not the case in the Middle East where solfege alone is used. This often creates moments of confusion for the Western student who, upon hearing mention of "si", first thinks of the note "C" rather than the solfege syllable which designates the note "B."

8. Other examples of theory books with this orientation include Fahmi's *al-Mūsīqá al-ʿArabiyyah* (1965), which the title page declares was written "in accordance with the modern curriculum of schools and institutes of music," Farah's *Mabādī' al-ʿUlūm al-Mūsīqiyyah* (1974), and Mashʿal's *al-Tafsīr al-ʿIlmī Li Qawāʿid al-Mūsīqá* (n.d.).

9. Nasir is so infatuated with the Western system of nomenclature that he even takes the unusual step of presenting the Western alphabetical equivalents to the solfege syllables (do = c; re = d; mi = e, etc.). No other book of those surveyed presents this material and it is worth repeating here that the alphabetical system for naming the notes is not used in the Middle East.

10. Arab music's instrumental tradition, with its plethora of short (approximately five-minute) compositions, was especially suited to the introduction of a notational system. This is not the case, however, with the improvisatory genres, the instrumental taqāsīm and the vocal layālī and mawwāl. It is common today to hear music teachers and performers state that these genres should not be notated. During a series of music lessons in 1982 which focused on taqāsīm, George Michel, one of Cairo's most renowned 'ūd players, repeatedly emphasized that taqāsīm should not be learned from notation. Michel feels that this would have a negative effect on one's long-term ability to improvise. Significantly, the music historian, Mahmud Kamil, says that he has noticed a decline in performers' ability to play taqāsīm, a decline which he attributes largely to an over-reliance on music notation (personal communication 6/16/87). Such sentiments have not prevented transcribed taqāsīm from appearing in a number of recent publications (see 'Arafah 1976; 'Iffat c. 1980, Qatr n.d.; etc.).

11. Another important factor in the movement away from heterophony has been the growth in the size of the performance ensemble (Racy 1988:158). The traditional chamber ensemble (the takht) ideally had only one of each type of instrument. The modern day orchestra (the firqah) usually has 10 to 12 violins. With such a large violin section, the freedom inherent in heterophony could easily result in cacophony. Playing in unisons and octaves, facilitated by the presence of Western notation, became the norm.

CHAPTER IV: TUNING AND TEMPERAMENT

A. Where are the Twenty-Four Notes Per Octave?: Theorists' Presentations of the Exact Placement of the Pitches in Arab Music

A.1. The Most Prominent of the Pre-Modern Theories:

There were a number of treatises during the medieval period (8th-13th centuries) which discuss intonation (see Farmer 1936 for a brief summary of some of these works). Of the many theories presented, it is those of Safi al-Din (d.1294) which have been called "the chief model for subsequent generations" (Shiloah 1981:23 and others). A student of the Pythagorean school, Safi al-Din divided the octave into two conjunct tetrachords plus a whole tone; his general scale contained seventeen notes per octave. Each of the five whole-steps in the octave were divided into three parts, limma (90.2 cents) + limma + comma (23.5 cents); this accounts for fifteen of the seventeen notes. The two remaining notes follow two undivided limma-sized half-step intervals (see Wright 1978; Wright 1981:518ff.; various works by Farmer including 1936:752-53; Shiloah 1981; etc.):

```
        1st tetrachord               2nd tetrachord         whole tone
¦----------------------------¦----------------------------¦-----------¦
G           A           B    c           d           e    f           g
¦____¦____¦_¦____¦____¦_¦____¦____¦____¦_¦____¦____¦_¦____¦____¦____¦_¦
  L    L   c¦ L    L   c¦ L  ¦ L    L   c¦ L    L   c¦ L  ¦ L    L   c¦
            ¦           ¦    ¦           ¦           ¦    ¦           ¦
```

Beyond statements that "subsequent generations" based their theories on the work of Safi al-Din, little has been written on the scalar theories prominent from the fourteenth to eighteenth centuries. Modern scholarship has tended to proceed directly from a discussion of Safi al-Din's theories to a presentation of the theories of the modern period (see Farmer 1936; Wright 1981:518-519 offers a recent example of this phenomenon). Shiloah's comments on the seven ordinal note names (see Chapter II, note 8) stand as the most significant statements on the subject in the literature surveyed for the present study. A separate study on this topic is needed.

A.2. Defining the Arab Twenty-Four-Tone Scale as an Equal-Tempered Quarter-Tone Scale; A History

Based on information provided by the Baron de Tott (see Chapter I and II), Laborde presented the earliest known description of the twenty-four tone Arab scale in 1780 (p.437). Laborde gave the twenty-four tones (plus a twenty-fifth, the octave of the first) for the octave from C to c and compared this scale to the European twelve-tone equal-tempered scale (this is reproduced in Appendix 1). Laborde wrote, "By comparing [the Arab method of dividing the scale] with the division by equal semi-tones, we find there is a clear correspondence. One sees that they divide in quarter that which the Europeans divide in two ..."

(ibid.:438). He then provides two additional tables in which he shows the correspondence between the Arab scale divided into twenty-four "quarts de tons" and the European scale of twelve equal-tempered half tones.

A report of a twenty-four tone scale does not, in itself, tell us where the pitches lie within the octave. Thus it is significant that Laborde states that the Arab scale is comprised of 24 "quarter tones." [1] It is not clear, however, whether this analysis was part of the Baron de Tott's report (and might thus represent the indigenous Arab conceptualization of the scale) or whether it was something that Laborde came up with on his own. Laborde's lack of familiarity with Arab music is evident in his closing comment: "... but we admit that we [have] not heard anything [of Arab music], and we hope to never hear a system founded upon quarters of a tone" (ibid.:439).

The first known Arabic source to present the twenty-four tone scale is the manuscript by al-'Aṭṭār, Rannat al-Awtār fī Jadāwil al-Afkār fī Fann al-Mūsīqār (cited in Shiloah 1979:64-66). Western scholars have not as yet succeeded in obtaining a complete copy of this treatise. It is only from a later work by al-'Attar's student, Mashaqah, that we learn of a demonstration that al-'Attar devised in order to show the exact placement of the twenty-four pitches. Although the demonstration is faulty, as Mashaqah himself points out, it seems clear that al-'Attar's scale was, by intention, a quarter-tone scale in which the quarter tones were all of equal size, i.e., an equal-tempered quarter-tone scale. This demonstration is discussed below.

It is in Mashāqah's *al-Risālah al-Shihābiyyah fī al-Ṣināʿah al-Mūsīqiyyah* that we find what seems to be the first indigenous description of the twenty-four tone scale *as a "quarter-tone" scale*: Mashaqah uses the term *rubʿ* (pl. *arbāʿ*; i.e., quarter tones or steps) to describe the scale, saying that the octave contains twenty-four *arbāʿ* and that the fundamental scale has three large intervals of four *arbāʿ* and four small intervals of three *arbāʿ*.

Although this aspect of the theory was generally accepted at the time (see the quote to this effect from Mashaqah's work on p. 70 above), there was as yet no mathematical theorem which explained the exact placement of the twenty-four quarter-tones. The formulation of such a theorem came to occupy al-ʿAttar, his friend ʿAbdullah Muhurdar, and the student, Mashaqah. These three theorists approached the issue in terms of the question, "How are the twenty-four notes to be obtained in practice?" In order to address this question they resorted to the time-honored tradition in Arab music theory of referring to fret positions on an instrument of the lute variety. But whereas the theorists of the medieval period refer to the *ʿūd* (a short-necked lute) for such discussions, al-ʿAttar and Mashaqah refer to the long-necked lute, the *tanbūr* (or tambour). [2] In his treatise, Mashaqah presents four theories which seek to demonstate the exact fret positions necessary for obtaining twenty-four equal-tempered quarter tones, one formulated by al-'Attar, three of his own creation.

al-'Attar begins his presentation with the open string of a tanbūr which gives the note Yakah (GG). He then places a fret half way up the string, the fret giving the note Nawa (G), the octave of Yakah. Next he divides the length of the string between the nut (the upper end of the fingerboard) and the Nawa fret into twenty-four equal parts. Putting a fret at each of these points, he comments that the first fret will give the note qarar nim Hisar (GG=/=), the second will give the note qarar Hisar (GG#/AAb), the third will give the note tik Hisar (AA-b-), etc., until one reaches the twenty-fourth fret which is the Nawa fret placed earlier in the experiment. al-'Attar reenacts the same prodecure in order to arrive at the fret positions for a second octave: the distance between the Nawa fret and the bridge of the instrument is halved and a fret is placed at that point giving the note Ramal Tuti (or jawab Nawa, i.e., g). The length of string between the Nawa and Ramal Tuti frets is then divided into twenty-four equal parts (Mashaqah 1899:933-934 and 1018ff.; 1913:53ff.).

Mashaqah realized the error in Shaykh al-'Attar's presentation: "... the [distance between the frets of] the quarter tones diminishes according to a geometric progression and not as the shaykh has indicated ..." (1899:1021; 1913:55-56 and 107-108). In other words, equidistant frets do not give equal-tempered notes. After explaining this flaw, Mashaqah proceeds to offer three methods of his own, both geometric and arithmetic, for arriving at the correct fret placements (these methods are discussed in D'Erlanger 1949:32-35; Ronzevalle 1899:1074ff.; Land 1885:75ff.; Collangettes 1904:417-418; and Farmer 1936:754).

What D'Erlanger labels as "the most simple of the mathematical methods" (1949:33) supposes that the string of a tanbur is divided into 3,456 parts. The pitch of the open string is called Yakah; the half way point, at 1,728, gives Nawa, i.e. the octave. The fret positions for the 24 quarter tones in this octave are arrived at in the following fashion: starting at Nawa (at 1,728) and working towards the upper end of the fingerboard the frets are positioned, successively, at a distance of 49, 51, 53, 55, etc., parts from each other, the distance increasing by two each time until with 91, 93, and finally 95, one reaches the 3,456th and last position, equivalent to the open string (Mashaqah [1840] 1899:1073-1074). J.P.N. Land, writing within a few years of Ellis' formulation of the system of cents, provided an analysis in cents of the resultant pitches (1885:76; see also D'Erlanger 1949:34).

The following table, based on presentations in Mashaqah [1840] 1899:1074, J.P.N. Land 1885:76, and D'Erlanger 1949:34, summarizes Mashaqah's theory and analyzes the resulting scale.

key for the following table:

sol.:	solfege equivalents (not given by Mashaqah).
M.'s i.:	Mashaqah's intervals in terms of a string of 3456 parts.
M.'s f.p.:	Mashaqah's fret positions in terms of a string of 3456 parts.
c.v.i.:	cent value of the intervals between the pitches (provided by Land and D'Erlanger).
c.v.p.:	cent value of the pitches, given cumulatively with Yakah as the starting point (provided by Land and D'Erlanger).

sol.	Mashaqah's note names (modern names if diff.)	M.'s i	M.'s f.p.	c.v.i.	c.v.p.
sol	YAKAH		3456		0
		95 {		} 48.2	
	qarar nim Hisar		3361		48.2
		93 {		} 48.4	
	qarar Hisar		3268		96.6
		91 {		} 48.9	
	qarar tik Hisar		3177		144.5
		89 {		} 49.2	
la	`USHAYRAN		3088		194.7
		87 {		} 49.5	
	qarar nim `Ajam		3001		244.2
	(nim `Ajam `Ushayran)	85 {		} 49.8	
	qarar `Ajam		2916		294
	(`Ajam `Ushayran)	83 {		} 50	
si-b-	`IRAQ		2833		344
		81 {		} 50	
	Kawasht		2752		394
		79 {		} 50.1	
	tik Kawasht		2673		444.1
		77 {		} 50.6	
do	RAST (RĀST)		2596		494.7
		75 {		} 50.6	
	nim Zirkulah		2521		545.3
		73 {		} 50.8	
	Zirkulah		2448		596.1
		71 {		} 50.9	
	tik Zirkulah		2377		647
		69 {		} 51	
re	DUKAH		2308		698
		67 {		} 51	
	nim Kurdi (nim Kurd)		2241		749
		65 {		} 50.9	
	Kurdi (Kurd)		2176		799.9
		63 {		} 50.8	
mi-b-	SIKAH		2113		850.7
		61 {		} 50.7	
	Busalik		2052		901.4
		59 {		} 50.5	
	tik Busalik		1993		951.9
		57 {		} 50.3	
fa	JAHARKAH		1936		1002.2
		55 {		} 49.9	
	nim Hijaz (or) `Arba'		1881		1052.1
		53 {		} 49.5	
	Hijaz		1828		1101.6
		51 {		} 49	
	tik Hijaz		1777		1150.6
		49 {		} 48.4	
sol	NAWA		1728		1199

From this table (see the column marked c.v.i.), we see that the sizes of the resulting quarter-step intervals deviate only slightly from the 50 cents of an equal-tempered quarter-tone system, ranging from 48.2 cents to 51 cents. Similarly, the positions of the 24 pitches deviate again only slightly from those of an equal tempered system (see the c.v.p. column), the greatest deviation being 6 cents for 'Ajam 'Usnayran, 'Iraq, and Kawasht.

Although the methods offered by al-'Attar and Mashaqah for demonstrating the position of the quarter-tones are not perfect (al-'Attar's being based on a false assumption, Mashaqah's deviating from equal temperament by small numbers of cents), it is clear that their intent was to determine the exact fret positions on the tanbur so as to achieve twenty-four equal-tempered intervals (Ellis and Parisot, cited in Farmer 1936:754; Ronzevalle 1899:1076 n.1). As such, these theories occupy a position of historical importance for being the first conclusive evidence that the twenty-four-tone scale was being viewed, at least, by some, as an equal-tempered scale. [3]

D'Erlanger commented on the inaccuracies within these theories by noting that they were "propagated in a milieu [i.e. Damascus of the 1820s-1840s] that was still ignorant of the modern methods of calculus" (1949:32). The "modern method" D'Erlanger had in mind is undoubtably the formula for the 24th root of 2 ($\sqrt[24]{2}$). In terms of cents, this formula divides the octave (1200 cents) into 24 equal parts, resulting in a value of 50 cents for each of the 24 steps. If Yakah (GG) is 0, then qarar nim Hisar (GG=/=) would be at 50 cents, qarar Hisar (GG#/AAb) at 100 cents, qarar tik Hisar (AA-b-) at 150 cents, ‘Ushayran (AA) at 200 cents, etc.

Within the realm of modern Arab music theory, Ronzevalle is the first among the sources used for the present study to state that the 24th root of 2 is the answer to the problem of exact intonation in a 24-tone equal-tempered system. Significantly, he acknowledges that his understanding of this point came from scholars of Western music:

> Someone has asked us for a simple way to arrive at the division of a string into equal intervals. We answer him that this subject is one of the chapters in physics books where it is explained, in one way or another, that they divide the octave into 12 equal half-steps so that they arrive at what is known as the tempered scale (*al-dīwān al-mu‘tadil*). The way to do this is to divide 1 by $\sqrt[12]{2}$ or $1/\sqrt[12]{2}$, then $1/\sqrt[12]{2}$ to the 2nd power..., then $1/\sqrt[12]{2}$ to the third power ..., etc. We arrive at, from this, the length of the string for the derivation of equal half- steps. In order to divide [the string] into 24 equal quarter steps, it suffices for us to substitute 12 with 24 and the results will thus be in logarithmic terms: $1/\sqrt[24]{2} = 0.971532...$ for the first quarter step (we have taken 1 on the assumption that the length of the string is 1 meter), then $1/\sqrt[24]{2}$ to the second power = 0.94387... for the second quarter step, and so on ... with this series necessarily ending at 0.50 for the length of the octave. (Ronzevalle 1899:1024-1025)

With these lines, the idea of an exact equal-tempered quarter-tone scale is finally introduced into the Arabic theoretical literature. It should be remembered, though, that this might have been the intent behind the twenty-four tone system that was first recorded in 1780.

While at least some Syrian-based scholars had apparently embraced the equal-tempered quarter-tone system in the early years of the modern period, it seems that Egyptians did not enter into discussions of exact pitch placement until the late-nineteenth and early-twentieth centuries. These discussions were stimulated by four developments. First was the conspicuous presence which Western music and its system of temperament came to have in Egyptian society. For example, Western twelve-tone equal temperament was an standard feature in pianos found in many upper class Cairo homes in the early twentieth century. It was also taught in the schools of Western military music which were founded early in the nineteenth century.

Second, Arab theorists became familiar with the sonometer, a devise for conducting empirical studies of intonation. Moustapha used the sonometer for his 1887 study, "La Valeur des Intervalles dans la Musique Arabe." al-Khula'i includes an early description of this "new" device in his 1904 work (p.59). (The sonometer is described below.)

Third, the Egyptian, Muḥammad Dhākir Bey, wrote a treatise in 1895 in which he compared fourteen of the Arab notes (the seven fundamental notes and the seven 'arabāt /anṣāf) to the West's equal-tempered half-tone scale (al-Shawqi 1969:7). [4] Such a comparison had already been carried out in 1780 by Laborde but that had been for a European audience (Laborde's work, in French, was published in Paris). Dhakir learned of equal temperament at a military-band school in Eqypt.

A fourth factor which stimulated the new interest in intonation studies in Egypt was Ronzevalle's critical edition of Mashaqah's treatise which appeared in the journal al-Mashriq in 1899. This publication included 1) Mashaqah's descriptions of al-'Attar's and his own theories for placing the frets in order to achieve equal-sized intervals; 2) Ronzevalle's discussion of the twelfth root of two; and 3) a table by Ronzevalle which contains frequency values, string length figures, and solfege equivalents for each of the notes of the Arab quarter-tone scale (this table is reproduced in al-Khula'i 1904:35 and Rouanet 1922:2752). [5]

Not concerned with the fact that Levantine theorists had already presented the Arab scale as an equal-tempered system in the nineteenth century (Mashaqah c.1840 and Ronzevalle 1899, to say nothing of Laborde 1780), Egyptian theorists felt that equal temperament was still an open issue, one that needed to be either accepted or rejected. In the face of empirical studies which suggested that musicians do not use equal-tempered intervals [6], the supporters of equal temperament began to promote their cause with near-religious fervor.

Twentieth-century advocates of equal temperament based their stance on a number of different points. First, temperament was considered essential because it allows for free modal transposition. Second, many felt that it was easier to teach a tempered scale than a non-tempered scale; thus, it was considered indispensable for the newly established music institutes (see Recueil 1934:597). Third, many viewed equal temperament as a direct borrowing from Western music. Considering temperament to be a factor in Western music's perceived superiority (see Rida 1935:6, cited by Racy, "in press"), they felt that Arab music must affirm its scale to be similarly tempered in order to assure Arab music's continued development. Many who held this last line of reasoning believed that Arab music was evolving towards the use of harmony and polyphonic textures and thus considered the adoption of equal temperament as a necessary step in preparation for these developments (Recueil ibid.).

Significantly, these arguments in favor of equal temperament were not mentioned by the nineteenth-century Levantine theorists who had already assumed the Arab scale to be equal tempered. These, then, are twentieth-century arguments. The difference between the stances held by nineteenth-century Levantine theorists and many (but not all) of the twentieth-century Egyptian theorists might be stated as follows: The former seems to assume that equal temperament closely matched the reality of Arab music practice. The tempered quarter-tone scale was a new descriptive device that was already inherent to Arab music. The latter seems to accept that the indigenous system was not equal tempered. It argues, however, that Arab music was flexible enough so that it could adopt equal temperament, and could benefit by doing so. Those holding the latter viewpoint were proponents of a change in the performance practice; those holding the former viewpoint were proponents only of a new theoretical model.

One of the most prominent of the early-twentieth century supporters of equal temperament was Emile Arian (Amīl ʿAryān), an Egyptian engineer. In a 1924 article entitled "Preuve Irréfutable de la Division de l'Échelle Musicale Orientale en 24 Quarts de Tons," Arian rejects previous attempts at defining the scale in terms other than those of equal temperament, saying "the oriental scale ... is divided, in reality, into 24 equal quarter-tones ..." (1924:164). (This is the former of the two stances described above.) Arian includes a table similar to that provided by Ronzevalle (1899:299) in which the quarter tones over one octave are assigned frequency values and string lengths in terms of an open string of 2 meters. His figures for the string lengths are consistently within one-tenth of a cent of those of equal temperament.

In order to gain support for his theories, Arian constructed a piano which gave the twenty-four equal quarter-tones over six octaves, and proceeded to give demonstrations on this instrument to various music organizations in Cairo:

> It was on [the basis of the numbers contained in his table] that I constructed my first model of a piano which I displayed, in December 1922, and which yielded for me the following testimony from the greatest contemporary composers and musicians:
>
> 'On the date of December 22, 1922, we the undersigned were gathered together to examine the piano invented by the engineer, Arian. This piano emits all the oriental scales and permits the transposition of all of them on each of the 24 quarter tones which make up the Arab scale.' (Arian 1924:165)

Unfortunately, Arian does not include the names of the signees. The above article is a transcript of a paper which Arian read, seeking further support for his ideas, at a meeting of L'Institut d'Égypte in May, 1924.

Since the 1920s, equal temperament has been supported by a majority of Egyptian theorists and musicians. This is apparent from reports of three different gatherings. The Syrian 'Adnan Ibn Dhurayl writes that soon after the establishment of the Royal Institute for Arab Music in Cairo in 1929, there were discussions on the Arab scale.

> In 1930, a committee [at the Institute] confirmed the suitability of the calculations of the tempered scale, and was of the opinion that the numbers which it obtained from its own experiments conformed exactly to the numbers which are obtained from the succession of twenty-four equal tones, arising from the principle of the twenty-fourth root [of two]. (Ibn Dhurayl 1969:17-18).

Ibn Dhurayl lists a number of the musicians/scholars who were part of this committee and shared in this decision: Muṣṭafá Radā, Ṣafar 'Alī, Muḥammad al-'Aqqād, Adwār Fāris, Najīb Niḥās, Muṣṭafá al-'Aqqād, Amīl 'Aryān (Arian), Sāmī al-Shawwā, and Maḥmūd Zakī (ibid.:18). Ibn Dhurayl adds that "Egyptians have continued to support the tempered scale and its calculations; today they support it almost unanimously" (ibid.:19).

Arian later took part in the Cairo 1932 Congress, where he was secretary of the Commission on the Musical Scale (Recueil 1934:42). At one point he appeared before the Commission on Modes and sought its support for the equal-tempered scale. The minutes of the commission's 13th session state:

> The commission examined a list explaining the modes (maqāmāt) employed in Egypt and their intervals on a paper divided into millimeters by Emil Erian Effendi ... These intervals were explained by Erian in conformity with the scale of 24 equal quarter-tones to the octave.
>
> The members (of the Commission) were of the opinion to accept them, on the condition that the Commission on the Scale approved this division [of the octave]... (Recueil 1934:153)

Obviously, then, the concept of equal temperament was widely accepted among both musicians and theorists. (However, see further discussion on the stance of the 1932 Congress regarding equal temperament; Appendix 5.)

Support for equal temperament was expressed again in 1957 and 1961-63 when a branch of the Egyptian government convened two conferences on Arab music. At both conferences, the following resolution was passed: "To consider the tempered musical scale (al-sullam al-mūsīqī al-mu'addal) as the basis for building the Arab musical modes in Egypt, and this until a study of the intervals of the scale is completed by a committee [convened especially for this purpose]" (al-Halqah al-Thāniyah 1964:11; see also Shawqi 1969:17 and 163). (To my knowledge, the special committee's study never took place.) [7]

While seeking to document how the concept of equal temperament has fared in Egypt since the 1957 and 1961-63 conferences, I am struck by the fact that the issue ceases to occupy the attention of a majority of the published theorists. [8] Most are content to describe the scale as being divided into twenty-four quarter-tones without addressing the issue of whether these notes are part of an equal-tempered system or not. Beyond the definitions of pitches and intervals in terms of quarter steps (arbā'), no indication is provided as to the exact placement of the pitches or the size of the intervals. Cent values, frequency ratios, and fret positions are not discussed. The implication, however, pervades that the arbā' are all equal in size; indeed no assertion is ever made to the contrary. [9]

Ibn Dhurayl supports this idea, saying unequivocally that by defining the fundamental Arab (Rast) scale in terms of intervals of four quarters and three quarters, one is subscribing to the theory of equal temperament: "These calculations [4 - 3 - 3 - 4 etc., for the intervals between the notes of the Rast scale] are the calculations of equal quarter-tones" (1969:29). Such a scale is a "tempered scale" (al-sullam al-mu'tadil)(ibid.:14). According to Ibn Dhurayl, then, by discussing the Arab scale in terms of arbā', as has been the general practice since Mashaqah first presented this theory in c.1840, one is subscribing to the system of twenty-four equal-tempered quarter-tones. (This is not, however, the last word on the subject, for many who define the intervals in terms of quarter tones also subscribe to either specific instances of variant intonation or a general theory of pitch variability; see Section B of this chapter.)

A.3. Opposition to the Equal-Tempered Scale

Support for the equal temperament was by no means universal. For example, soon after Ronzevalle introduced the twenty-fourth root of two into discussions of Arab music theory (1899), Collangettes, a French scholar, declared (1904:419), "The modern scale is not a tempered scale that derives its progression from $\sqrt[24]{2}$ ..." (this line is quoted in Shiloah 1981:26; D'Erlanger 1949:22 and Rouanet 1923:50; see also al-Faruqi 1974:73 and Ibn Dhurayl 1979:10).

Those against the tempered scale have tended to base their theories of intonation on one or more of the following: Pythagorean tuning, idiosynchronic theories based on commas, just intonation, non-Pythagorean frequency ratios proposed by medieval Arab music theorists (al-Farabi, et al.), and empirical studies.

Collangettes' objection to the equal-tempered system was based on his belief that the scale used by the musicians of the modern period is the same as that used by the musicians and theorists of the medieval period. He felt that medieval theorists had already calculated the correct intervals and pitch positions (their calculations being based on Pythagorean intervals plus a few additional ratios to account for the half-flat intervals). Thus he held that there was no need to establish a new basis--such as equal temperament--for determining the intonation of the intervals of the modern scale. (al-Faruqi, 1974:58ff., agrees with Collangettes.) The scalar theories of the medieval theorists did not, however, provide for a scale of twenty-four tones; thus, Collangettes concluded that the modern scale "is the old scale of the thirteenth century to which one has added some small intervals" (1904:419). (See D'Erlanger 1949:21ff. for an explanation of Collangettes' scale.)

a. The Syrian School:

Throughout the twentieth century, there has been a strong tradition in Syria for theorists to use a Pythagorean-based system for explaining the Arab scale. These theorists make up what is often referred to as "the Syrian school" of modern Arab intonational theory. D'Erlanger comments,

> Although their scale is composed in truth of twenty-five degrees [i.e., 24 plus the octave] and twenty-four intervals to the octave ... the Arab musicians of Syria do not measure these small intervals in rub' or quarters, but in Pythagorean commas at a rate of nine per major [whole] tone and fifty-three to the octave.
>
> One still finds, in effect, in Syria some reminiscences of the old Hellenistic traditions preserved through the ages ... (1949:28)

In Ibn Dhurayl's al-Mūsīqá fī Sūriyyah (Music in Syria), (1969), we find a whole book expounding the existence of a separate Syrian school of intonation. Throughout the book there are such statements as "Arab scholars in Egypt have adhered to the calculations of equal quarter-tones and its tempered scale ... whereas Arab scholars in Syria have endeavored to define the Arab scale in terms of commas and limmas; this being the Pythagorean system, the traditional Arab system" (p.16); and, "the studies of Syrians after [the 1932 Congress] have continued to reject the tempered scale ... while the Egyptians have continued to support the tempered scale" (p.19). This is not to say that all Syrian musicians and theorists reject the equal-tempered scale (Mashaqah, the first to expound the tempered system, was from Lebanon and Damascus) or that supporters of non-equal tempered systems are found only in Syrian lands (see the following pages).

One of the reasons given to explain the existence of a Pythagorean-based school of Arab music theory in Syria is the region's proximity to and close historical associations with Turkey, for modern Turkish music theory, formulated during the early years of the twentieth century, is based on a Pythagorean system of commas (see Signell 1977:3-9 and elsewhere). Ibn Dhurayl, from Syria, writes that "despite the separation which divided the Arab countries ... from the Turks and their art forms after World War I, nevertheless Turkish music is still beloved to our souls and our sensitivities" (1969:19). In fact, in the nineteenth and early-twentieth centuries Syrian musicians and music scholars often received their training in Turkey. One of the more prominent members of the so-called "Syrian school," Shaykh 'Alī Darwīsh, is a case in point. 'Alī Darwīsh, a nay player, theorist, and music educator (1884-1952), studied at a Turkish institute of music in Istanbul called Dār al-Alḥān (Ibn Dhurayl 1969:14). [10] (See D'Erlanger 1949:28-30 for a discussion of 'Ali Darwish's theories.)

One of the most detailed presentations of the theories of a single member of the Syrian school is contained in two works by Tawfīq al-Ṣabbāgh, *al-Dalīl al-Mūsīqī al-'Āmm* (The General Music Guide)(1950) and *al-Anghām al-Sharqiyyah* (The Eastern Modes)(1954). al-Sabbagh (1892-1964; dates given in Ibn Dhurayl 1969:54) was an adamant opponent of the system of equal-tempered quarter-tones even though he admitted it to be the prevailing system of his time (1950:31). al-Sabbagh based his theories on commas instead of *arbā'*, with fifty-three commas to the octave and nine per whole tone. He assigned the following comma values to the intervals of the fundamental scale:

Rast Dukah Sikah Jaharkah Nawa Husayni Awj Kirdan
9 6 3/4 6 1/4 9 9 6 3/4 6 1/4

For the sake of convenience he then rounded off the 6 3/4 figures to 7 and the 6 1/4 figures to 6 (1950:32). Thus,

Rast Dukah Sikah Jaharkah Nawa Husayni Awj Kirdan
9 7 6 9 9 7 6

(The rounded-off figures match 'Ali Darwish's comma analysis of the fundamental scale; see D'Eranger 1949:29). In terms of cents, the following scale results (the numbers in parantheses are the rounded-off figures): (See Appendix 6 for further discussion of al-Sabbagh's theories of intonation.)

	Commas	cents values for the Intervals	cents values for the Pitches
Rast	- - -	- - -	- 0
	9	203.8	
Dukah	- - -	- - -	- 203.8
	6 3/4 (7)	152.8 (158.5)	
Sikah	- - -	- - -	- 356.6 (362.3)
	6 1/4 (6)	141.5 (135.8)	
Jaharkah	- - -	- - -	- 498.1
	9	203.8	
Nawa	- - -	- - -	- 701.9
	9	203.8	
Husayni	- - -	- - -	- 905.7
	6 3/4 (7)	152.8 (158.4)	
Awj	- - -	- - -	- 1058.5 (1064.2)
	6 1/4 (6)	141.5 (135.8)	
Kirdan	- - -	- - -	- 1200

A consistent feature of the theories of the Syrian school is that the interval from Dukah to Sikah (D to E-b-) is presented as being larger than the interval from Sikah to Jaharkah (E-b- to F). Similarly the interval from Husayni to Awj (A to B-b-) is considered larger than the interval from Awj to Kirdan (B-b- to c). In contrast, these intervals are all equal according to the system of equal temperament, i.e., they are all 150 cents (three quarter-steps). This difference between the two systems can be restated: theorists of the Syrian school place their half-flats higher than do those who accept equal temperament. The higher position for the half-flat notes seems to reflect a regional preference for it has been widely acknowledged that Syrian musicians play their half-flats a little higher than do their Egyptian counterparts (Recueil 1934:595-596; D'Erlanger 1949:43; George Michel, personal communication 11/23/82; etc.). This might be the principal reason for Syrian opposition to the equal-tempered scale.

Two other important members of the Syrian school are Mikha'il Allah Wayrdi and Majdi al-'Aqili. The former, born in 1904, is author of Falsafat al-Mūsīqá al-Sharqiyyah (The Philosophy of Eastern Music) (1949) and "Jawlah fī 'Ulūm al-Mūsīqá al-'Arabiyyah" (An Excursion in the Sciences of Arab Music) (1968) (see Ibn Dhurayl 1969:59-72,91-94 and elsewhere). al-'Aqili, born in 1917, is author of al-Samā' 'ind al-'Arab (The Art of Listening among the Arabs) (see Ibn Dhurayl ibid.:73-83). Both take stands against the tempered quarter-tone scale.

b. Opposition to Equal Temperament Among Egyptian Theorists

Opposition to the equal-tempered quarter-tone scale has not been confined to members of the Syrian school. Since the earliest years of the quarter-tone system, a few individual Egyptian theorists have offered alternate methods for describing the scale. With virtually no exception, however, these Egyptian theorists differ from their Syrian counterparts by not using commas as a measure of scalar intervals. [11]

Villoteau reports that he found a number of non-quarter-tone theories in music treatises that he came across during fieldwork conducted in Egypt from 1798-1801. Unfortunately Villoteau does not name, date, or quote from these treatises (see note 5 in Chapter I):

> ... the authors have not always been in agreement about the method of composing it [music]: some divide the octave by tones, semitones, and quarter tones, and count by consequence twenty-four different tones in the musical scale; others divide it by tones and thirds of tones and make the musical scale of eighteen notes; others accept eighth tones, which produces forty-eight notes; and a few, lastly, claim that the general diagram of the notes contains forty sounds ... (1826:13-14)

In his own analysis of Egyptian practice, Villoteau decided that the Arab scale contained thirds of a tone rather than quarter tones (1826:41-42).

Ibrahim Moustapha (Mustafa), an Egyptian writing in French in 1887, concludes an article entitled "La Valeur des Intervalles dans la Musique Arabe" with the following statement, matching Villoteau's analysis of the Arab scale: "One sees, from the foregoing, that in the scales employed in contemporary Arab music, at least in those which I have studied thus far, there are only the intervals of the value of tones, major and minor, two-thirds of a tone, and thirds of a tone, and that the semitone and the quarter tone are completely absent" (1887:259). Upon examination, however, Moustapha's theories prove faulty in major respects. (The intervals of the fourth and fifth, for example, are often not even close to their normal sizes.) Thus it is not surprising that his theories failed to gain support (see Arian, 1924, who briefly discusses and then dismisses the non-quarter-tone theories of Moustapha, Villoteau, and others). [12]

A number of Egyptian theorists who present non-tempered analyses of the modern Arab scale base their presentations on empirical studies. D'Erlanger states that these theorists have "wanted to set aside all theoretical prejudices of systemization and appreciate the intonation of [the intervals] solely by ear" (1949:39). For this they have relied on a sonometer, the most common instrument in Middle Eastern intonation studies during the first half of the twentieth century. Reminiscent of the canon used by ancient

Greek theorists, the sonometer consisted, minimally, of a single string with a moveable bridge. The string, of one meter, was calibrated in millimeters, allowing the theorist to determine the "sounding string/whole string" ratio (and thus the frequency ratio) of any pitch he might choose. One of the first to conduct such experiments was Moustapha, mentioned above. Another was Idrīs Rāghib with the help of al-Khula'i. al-Khula'i presents the results of their work, but only after he has fully expounded the quarter-tone system. The results are in the form of a table of the 24 + 1 notes from GG to G, with fret positions indicated for each in terms of millimetters (1904:32v). The scale is, to say the least, a non-tempered one, with quarter steps ranging from 25.5 cents to 69.3 cents. The following table gives the results of Rāghib and al-Khula'i's experiments. I have added an analysis of the intervals and note positions in terms of cents.

key to the following table:

note name: provided by al-Khula'i

string length: the open string, 1000 mm. in length, gives the note Yakah, i.e., GG. Figures provided by al-Khula'i.

c.v.p.: cents value of the pitches starting with Yakah.

c.v.i.: cents value of the intervals between the pitches.

The Sonometer Experiment of Idrīs Rāghib (al-Khulai 1904:32v) [13]

	note name	string length	c.v.p.	c.v.i.
G	Nawa	500	1200	
				67.9
G-b-	tik Hijaz/Saba	520	1132.1	
				55.7
F#	Hijaz	537	1076.4	
				38.3
F=/=	nim Hijaz	549	1038.1	
				43.5
F	Jaharkah	563	994.6	
				25.5
E=/=	Busalik/‘Ushaq	571	970.1	
				30.1
E	nim Busalik	581	940.1	
				68.7
E-b-	Sikah	604.5	871.4	
				63.2
Eb	Kurdi	627	808.2	
				41
D=/=	nim Kurdi/Nahawand	642	767.2	
				63.5
D	Dukah	666	703.7	
				51.2
D-b-	tik Zirkulah	686	652.5	
				47.3
Db	Zirkulah	705	605.2	
				50.8
C=/=	nim Zirkulah	726	554.4	
				56.4
C	Rast	750	498.0	
				34.2
BB=/=	Kawasht	765	463.8	
				31.4
BB	nim Kawasht/Rahawi	779	432.4	
				63.3
BB-b-	‘Iraq	808	369.1	
				67.3
BBb	‘Ajam ‘Ushayran	840	301.8	
				44.7
AA=/=	nim ‘Ajam ‘Ushayran	862	257.1	
				51.5
AA	‘Ushayran	888	205.6	
				38.5
AA-b-	tik qaba Hisar/Shuri	908	167.1	
				43.3
AAb	qaba Hisar	931	123.8	
				69.3
GG=/=	nim qaba Hisar	969	54.5	
				54.5
GG	Yakah	1000	0	

Three other works discuss non-tempered scales proposed by Egyptians. First, there is the report of an Egyptian subcommittee at the 1932 Congress which conducted a number of empirical tests of different scales. The results of the subcommittee's experiments are discussed in Appendix 5. Second, D'Erlanger (1949:35-44) discusses the theories of three Egyptians in addition to those of Rāghib (Manṣūr 'Awaḍ, A. Shalfūn, and Amīn al-Dīk; the latter admits "just" intervals including 5/4 and 10/9) and also presents a scale arrived at by the Egyptian sub-committee at the 1932 Congress. And third, Shawqī (1969) discusses theories of a number of twentieth-century Egyptians including the work of A.M. Musharrafah and Maḥmūd Mukhtār, and Yahyá al-Laythī.[14]

A.4. Whence the Twenty-Four-Tone Scale and Equal Temperament?

This section explores the rationale behind the "new" twenty-four-tone scale and the interpretation of this scale in terms of equal temperament. As an initial step I discuss a basic assumption that has informed many traditional theories of scale and intonation--the concept of rational versus irrational pitches.

a. Rational vs. Irrational

In the medieval period (starting with what Farmer has labeled the Greek Scholiast School which included the theorist al-Kindi, d. 874) Arab theorists expressed their scalar theories in terms of ratios. This was part of the legacy from ancient Greek music theory. Inherent in most theories based on ratios is a bias for "rational" pitches, i.e., pitches derived either mathematically or geometrically based on some pre-determined set of norms. Primary among "rational" pitches are those of the Pythagorean system, derived from successive applications of the intervals of the octave, fifth, and fourth. [15] Pitches obtained outside of these norms are commonly term "irrational."

The Rational Pitches: the Twelve Half-Step Notes

The Pythagorean system has played an important role in Arab music theory and practice because many of the pitches are arrived at in performance by successive applications of the octave, fifth, and fourth. For example, an analysis of the standard manner of teaching the stringing, tuning, and fingering of the ʿūd reveals that the ʿūd student is taught to play the twelve half-step notes (C, C#/Db, D, D#/Eb, E, F, etc.) using Pythagorean intonation. (Specific instances of variant intonation are discussed below; see Section B of this chapter.) A short explanation of the standard method of tuning and fingering the ʿūd is given here.

The four main courses of strings on the *ʿūd* are tuned in fourths: AA, D, G, and c. As the *ʿūd* is not fretted, the student must pay special attention to the fingering positions on these strings. Here, the student is given the guiding principle that he must "line up" his notes in order to achieve proper intonation (see diagrams to this effect in al-Khulaʿi 1904:50; Fatah Allah and Kamil 1982:29; and elsewhere). On strings tuned in perfect fourths, this means that the notes in the same "line" will be perfect fourths from each other.

From the open strings the student can tune three notes on these strings: C is tuned so as to be an octave below c; A and d are tuned so as to be an octave above AA and D, respectively.

```
 c   --------------d--------------------------
 G   --------------A--------------------------
 D   -----------------------------------------
 AA  --------------------------C--------------
```

From the "lines" created by these three notes the student finds five additional notes: F, Bb, and eb are in line with the note C; E and BB are in line with A and d.

```
 c   --------------d----------eb--------------
 G   --------------A----------Bb--------------
 D   --------------E----------F---------------
 AA  --------------BB---------C---------------
```

From these additional notes the student can find two new "lines" of pitches: the notes eb and Bb appear in a lower octave on the D and AA strings, and the notes E and BB appear in a higher octave on the c and G strings:

```
c    ---------------d-----------eb-----------e---
G    ---------------A-----------Bb-----------B---
D    --Eb-----------E-----------F----------------
AA   --Bb-----------BB----------C----------------
```

Completing these two new lines the student has found the twelve half-step pitches. These notes are all tuned according to Pythagorean intonation since they have been derived from successive applications of the intervals of the octave and the fourth. [16]

```
c    --db-----------d-----------eb-----------e---
G    --Ab-----------A-----------Bb-----------B---
D    --Eb-----------E-----------F------------F#--
AA   --Bb----------BB-----------C------------C#--
```

The Irrational Pitches: the Twelve Half-Flats and Half-Sharps

The Pythagorean and Just systems, as they are commonly defined [17], do not account for the half-flat and half-sharp pitches. Keeping to their definitions of "rationally derived" pitches, the supporters of these two systems are compelled to label the half-flats and half-sharps as "irrational" and even "artificial" (see D'Erlanger 1949:3 and 45). In a less judgmental vein, they label these pitches as "empirically derived." Unfortunately for these theorists, these "irrational" or "artificial" notes cannot be ignored for they play a major role in Arab music; Sikah and Awj (E-b- and B-b-) are part of the fundamental scale D'Erlanger expresses the rationalists' dismay at this fact:

> Upon the ... [Pythagorean scalar] structure some empirical tones have established themselves which one has never been able to banish from use in practice, and which the theorists have strived, in various ages, to insert into a regular diatonic [i.e., rational] conceptual scheme ...
>
> The adoption of these empirical degrees has had profound repercussions on the development of Arab scalar theory. What formula of division should be employed in order to include these empirical intervals in a regular structural scheme? - the solution to this problem still preoccupies the Arab musicians of our days. (1949:45; emphasis added)

While these notes could not be "banished" from practice, some theorists have sought to rationalize them in the realm of music theory. Wright (1978:31ff.) describes how Safi al-Din (d.1294) chose to represent these "irrational" notes with distant, but "rational" "just" intervals: the half-flat third, for example, of approximately 350 cents, was represented in Safi al-Din's theories by a just major third of 384 cents. Significantly, "Safi al-Din concedes ... that this adjustment [was but] a theoretical expedient ... He ...

admit[s] that the neutral third ... was frequently used in the music of his day..." (ibid.:31-32). Wright labels this as "passing the raw material of practice through a filter of theoretical presuppositions ..." (ibid.:2; quoted in Powers 1980:185).

The rationalists' stance was supported by the philosophical and metaphysical doctrine of "mimesis" which was part of the larger Greek legacy. This doctrine holds that all aspects of physical reality are reflections of a higher rational order, that this order is expressible in terms of numerical relationships, and that music is one of the purest manifestations of this rational order. This doctrine gave rise to various beliefs about the efficacy of music and also to numerous associations of the different pitches and modes with non-musical phenomena. The prominence of such beliefs among pre-modern Arab music theorists is evident in Shiloah's comments on music treatises written between the tenth and seventeenth centuries (Shiloah 1979). Notes and modes were related to the four elements (earth, water, air, and fire; ibid.:145), to climatic conditions (hot-dry, hot-humid, cold-humid, cold-dry; ibid.:169), to human moods (courage, delight, sadness, excitement; ibid.), to peoples and classes of men (Turks, Ethiopians, blacks, scholars, jurists, lovers and Sufis, women, servants, etc.; ibid.), to specific periods of the day (before sunrise, sunrise, breakfast time, midday, etc.; ibid.:170), to bodily humors (yellow bile, blood, phlegm, black bile; ibid.:249), to signs of the Zodiac (Cancer, Sagittarius, etc.; ibid.:369), and to the four seasons (ibid.). (See also the writings of the Ikhwan al-Safi and elsewhere). Music was also purported to have efficacy in the cure of medical and psychological ailments.

These beliefs, it can be argued, served to encourage the music theorist to represent the musical scale in sanctioned, rational terms, i.e., using mainly Pythagorean but also "just" intervals.

b. Rationality Redefined

By the beginning of the modern period, it seems that the very definition of what is "rational" had changed. Mimesis, with its focus on the cosmic plain, had lost its attraction. Modern-period theorists have tended to omit all references to "non-musical" correspondences. Mashaqah was one of the last to mention these past beliefs and practices: at the very end of his treatise he includes a brief refutation of the medicinal value of music ([1840] 1899:1080; see Smith 1847:217). (But see Chapter X, section P.) Conceptualizing the pitches in terms of numerical ratios, somewhat common in the medieval period, also became rare.

With respect to scalar theory, the argument for a new "rationality" might have been expressed as follows: "If the two half-flat intervals, Sikah and Awj, are such an essential part of the character of Arab music, then we should no longer view them as exceptions to an otherwise rational system. Rather we should find a new basis for Arab scalar theory which fully incorporates these intervals." This reformulation was accomplished in the eighteenth century with the invention of the quarter-tone system.

The question arises, "Was this an indigenous development or was it the result of Western influence?" The desire for a music theory which better incorporates the half-flats and half-sharps can be seen as indigenous. But significantly, this was the period when the West was in the process of adopting the equal-tempered twelve-tone scale. [18] Ibn Dhurayl (1969:10), without citation, says that Mashaqah admitted a Western basis to the quarter-tone system (I have not found a passage that supports this statement). We have seen that Ronzevalle pointed to a Western source for his understanding of the twenty-fourth root of two (see p. 170 above). Surely, it is easier to arrive at the idea of a quarter-tone system if one already understands the concept of an equal-tempered half-tone system. Unfortunately, however, we do not, as yet, have enough documentation from the years when the quarter-tone system was being formulated to answer this question with authority. What can be said is that the new theory was the result of a new philosophical climate which freed the theorist from the confines of the earlier definition of "rationality."

Collangettes, addressing the question of the origin of the quarter-tone system, inadvertently points to the same conclusion. He writes that "the modern scale is ... the ancient scale of the 13th century to which have been added several small intervals." These "small intervals," being some of the quarter tones, "seem to have been introduced because of a desire for regularity in the division of the octave" (1904:419; emphasis added). It is not, however, that the desire for regularity was a new idea of the modern period. The scale of Safi al-Din (13th c.) was considered a marvel of regularity (eliciting such responses as "the most perfect [scale] ever devised"; see, for example, Parry The Art of Music [1929:29] quoted in Farmer 1936:753). The modern scale was not the result of simply 'a desire for regularity,' but rather a desire for a new type of regularity which fully incorporates the Sikah and Awj intervals. [19]

c. The Quarter-Tone Scale and Transposition

Another reason given for the formulation of the quarter-tone scale is that it was in response to the practice of transposition (see Lachmann and Fox-Strangways 1935 iii:567, cited in Farmer 1936:754). This statement is based on the idea that the fundamental scale and a majority of the melodic modes, when in root position, use only a small number of the twelve half-flat and half-sharp notes. It is only when these modes are transposed that a number of the half-flat and half-sharp notes are ever used in the present day. Indeed, the ability to transpose freely has been cited by Arian ('Aryan) and others as "irrefutable proof" that the equal-tempered scale is the correct one for Arab music. (As quoted earlier, Arian's quarter-tone piano was praised for emitting "all the oriental scales and permit[ting] them to be transposed to each of the twenty-four quarter-tones of which the Arab scale is composed" [Arian 1924:165]). It must be emphasized, however, that the practice of transposition did not begin in the modern period; it has existed to some extent since the medieval period (see Villoteau 1826:69ff.; Shiloah 1979:53,84,170,239, etc.). Thus, while the desire to accomodate the practice of transposition might have been a contributing factor in the development of the quarter-tone system, it cannot be considered the sole factor for explaining why this scale was developed when it was.

As for later "after-the-fact" justifications for the quarter-tone system, some express the opinion that the new scale, especially the new tempered scale. was necessary for "preparing the way for the advancement of Arab music and for the simplification and consolidation of its rules" (paraphrased from the Syrian, Jabaqji; 1976:50). Similarly, at the 1932 Congress some suggested that "it is necessary to adopt the tempered scale because it facilitates teaching and the evolution of the music in the direction of orchestration ... We want to prepare Arab music for the future" (Recueil 1934:597).

d. Not Strictly Tempered or Pythagorean or Just

Although a number of theorists have sought to prove that the quarter-tone scale is an equal-tempered system or a modified Pythagorean system, the nature of Arab musical instruments has imbued the new scale with an aspect of ambiguity in this regard. Arab theory books stress that Arab and Western instruments differ because the latter confine the musician to a specific tuning system. (These Western instruments are called alāt thābitah, literally "bound" or "tied instruments.") Arab instruments, on the other hand, such as the fretless ʿūd, leave the musician free to play the Western scale of half-steps or the Arab scale of quarter-steps. They also allow the musician to tune his notes as he wishes. This has allowed the focus of the new scale to be, not on cycles per second or frequency ratios or cents (all ways of specifying exact intonation), but rather on the approximate placement of the notes within the octave. Thus we find that most modern theorists introduce the quarter-tone system in their works but do not mention the concept of equal temperament. When presenting the quarter-tone scale, most theorists are not refuting the existence of the Pythagorean third of 81/64 or the just third of 5/4 in Arab music, in part, because most Arab instruments do not confine performers to any one tuning system. Musicians are free to respond to a variety of acoustical issues and artistic urges (some of these issues and urges are discussed in the next section). Racy expresses this perception of the quarter-tone scale when he comments that the symbol for half-flat (-b-) "lowers a note by approximately a quarter tone while the symbol =/= [for half-sharp] raises a note by roughly a quarter tone" (1983b:131; emphasis added). [20]

In conclusion, soon after the quarter-tone scale was formulated, theorists began to consider the exact placement of the notes in this new system. Attempts by al-'Attar and Mashaqah in the early-nineteenth century to give numerical values to the fret positions of the notes in the new scale suggest that they considered the scale to be made up of equal-tempered quarter-tones. The exact equation for equal-tempered quarter-tones (the twenty-fourth root of two) was finally introduced into the literature by Ronzevalle in 1899. In the late-nineteenth and early-twentieth centuries, the issue of the exact placement of the pitches was raised anew by a new generation of theorists. Some declared that the Arab scale was equal-tempered. Others insisted it was not. Still others argued that, whatever the actual scale, Arab music could benefit by adopting the tempered scale. Over the last fifty years, this issue has, with few exceptions, ceased to play a prominent role in theoretical presentations of the quarter-tone scale. While the matter is not directly addressed, the implication in these presentations is that the quarter tones are all of equal size, i.e., the scale is, at least in theory, an equal-tempered one.

There is significant evidence that Pythagorean intonation plays an important role in Arab music performance. However, this system is not able to account for half-flats and half-sharps (especially the notes 'Iraq, Sikah, and Awj). The new quarter-tone scale, thus, fulfills a need in that it fully incorporates these notes into a single coherent theoretical system.

Finally, despite all the discussions on the exact placement of the pitches, most of the traditional Arab musical instruments allow the performer the freedom to tune his notes as he wishes. As a result, the performer is not restricted to a single system of intonation, be it Pythagorean or equal tempered.

It must be remembered, however, that the general scale of twenty-four quarter steps per octave is a theoretical abstraction that is never played. [21] When discussing the various notes as they occur in practice one must introduce additional factors such as modal context and melodic context. In the next section, we will add these factors into the discussion of the Arab scale.

B. Are There Notes Beyond the Standard Twenty-Four Per Octave: The Performer's Perspective

The theorists who have presented the various versions of the general scale discussed above, for the most part, view the scale as a unified and static phenomenon. Musicians, on the other hand, view the total inventory of tones as a composite phenomenon, made up of parts which exist only in the dynamic realm of performance. For musicians, then, the notes do not exist devoid of modal and melodic context.

Many musicians believe that context governs not only such factors as which notes are to be played and when, but also the exact intonation of the notes being played. Many, for example, recognize two or more positions for the note E-b- depending on modal or melodic context. One way in which the contextualization of pitch placement is brought to the fore is in discussions of whether or not there are notes beyond the standard twenty-four per octave. Those inclined towards conceptualizing additional pitches usually have an understanding of the "most common" position for the standard twenty-four notes per octave; they then conceive of given notes in particular contexts as occupying variant positions. The variant note might carry the same name as one of the standard notes (with, perhaps, the addition of a few words to indicate where the "deviant" pitch stands in relationship to the "more common" one), or the variant pitch may be given an independent name. We will see examples of both of these approaches in the following pages.

Intonation is a subject which allows for much discussion and individual interpretation. While there are a number of specific instances of variant intonation which are widely acknowledged by musicians throughout the region, it is not necessarily the case that a given master musician will subscribe to any or all of these instances. Among people acknowledged to be master musicians, some allow that the phenomenon of variant intonation occurs in only one or two maqamat; others claim that it occurs in a majority of the maqamat; still others claim that the phenomenon does not occur at all. In fact, it is common to find musicians who perform together and yet differ as to how they conceptualize aspects of intonation.

1. Six Responses

The issue of variant intonation is a popular one among large numbers of musicians and theorists. As part of my research I discussed the question of additional pitches beyond the standard twenty-four with my music teachers and with numerous musicians in the United States and Cairo. I have also analyzed relevant comments found in the literature used for the present study. Positions within this discussion fall into six general categories: a) No, there are no variant positions for the notes; b) the "minus a comma" concept; c) the "shrunken" augmented-seconds concept; d) the concept of multiple half-flats; e) variable pitch as a function of tonal focus; and f) the Syrian school of limmas and commas.

a) "No, there are no variant positions for the notes."

A number of musicians believe that there are no notes beyond the standard twenty-four per octave named by the modern music theory. The notes are thought to be in fixed positions which do not change in response to the mode being played or the immediate melodic context. When questioned, these musicians commonly state that the quarter-step intervals are all the same size; this is what theorists refer to as equal temperament. Among this group are those musicians who are not inclined toward any abstract conceptualization about intonation. After initially stating that there are no "extra" notes, many come to acknowledge one or more of the following five responses upon further questioning.

b) The "minus a comma" concept

There are a number of instances where musicians recognize variant notes as deviating from the norm by the interval of "a comma" (spelled k̲ū̲m̲ā̲ in Arabic, this term is from ancient Greek music theory). As used in this context, the term "comma" is not meant to signify an interval of any specific size and is thus never defined in terms of ratios or cents (see, however, a separate discussion on the use of commas by Syrian theorists). Rather, like the term "sruti" as it occurs in North Indian music today, "kūmā" is used to refer to slight changes in the pitch of a given note. Thus, when a specific note is said to be "minus a comma" (n̲ā̲q̲i̲s̲ k̲ū̲m̲ā̲), it means only that the note is slightly lowered from what is perceived to be the note's standard position.

In seeking the roots of this expression, it is relevant to recall that much of medieval Arab music theory was based on ancient Greek theory. However, more significant for explaining the contemporary use of the term is its presence in present-day Turkish theory. Although both Arab and Turkish theorists had discarded most of the Greek theory long before the start of the modern period, Turkish theorists reasserted the use of the comma when they reformulated Turkish music theory in the late-nineteenth and twentieth centuries (see Signell 1977:22ff.). Thus, contemporary Arab use of the term can in part be attributed to contact with the Turkish tradition. (Ottoman Turkish rule and influence continued well into the twentieth century.) It can also be seen as an infuence of the modern-day Syrian school of intonation (see Section A.3 of this chapter).

Discussions of this phenomenon also occur using a number of common adjectives such as wāṭī and ʿālī ("low" and "high", respectively). Thus, someone might say, "In this maqam, the Eb is "a little low" ("wāṭī shwayya" in Egyptian dialect). Another word that is common among present-day Cairo musicians is khassah, a slang word meaning "thin," "reduced," or "diminished" (the masculine form of the word is khāsis).

The most widely accepted example of the "minus a comma" phenomenon concerns the Eb (the minor third) in maqam Nahawand (C D Eb F G ...). This lowered Eb is occasionally called "Nahawand" in order to distinguish it from the standard Eb (which is called Kurd). While other instances of this phenomenon are subjects of controversy, the low Eb of Nahawand seems to be universally supported by those who subscribe to the "minus a comma" concept. In fact, this one example is so widely accepted that it can often be used to elicit reconsideration from a musician who has already given response number one (above). After I raised the question of Nahawand's Eb in interviews conducted in Cairo in 1982-84 and 1987, such individuals often responded, "Well, yes, in the case of maqam Nahawand ..."

The idea that the Eb in Nahawand is especially low has existed throughout the twentieth century. [22] al-Khulaʿi, writing in 1904, expressed this idea within the terms of the quarter-tone scale; use of the term "comma" to describe slight variations in pitch was, apparently, not yet in vogue at that time. In the quarter-tone system, the note slightly lower than Eb (Kurd) could only be D half-sharp (or E three-quarters flat), called nim Kurd. It is this note which al-Khula'i says is also called "Nahawand" (1904:31 & 32; see also Raghib in al-Khula'i ibid.:32v.; see table on p. above). Later in the same work, however, al-Khula'i gives the third of maqam Nahawand as the regular Eb, i.e., the note Kurd (ibid.:42); thus it seems clear that his earlier intention was not to equate Nahawand's third with D half-sharp or E three-quarters flat but rather to indicate, as best as he could, that the third of maqam Nahawand occupies a lowered position.

One of the first instances of the "minus a comma" terminology in the published sources occurs in al-Shawwa's 1946 work, al-Qawā'id al-Fanniyyah. al-Shawwa writes that five additional notes are needed beyond the standard twenty-four per octave. These five are all defined as standing one "comma" from one of the standard notes. (In keeping with its ambiguous nature, al-Shawwa never defines the term.) Among the five is one which he calls "Nahawand," saying that it is "lower than the note Kurd by a comma" (1946:13). As with al-Khula'i, al-Shawwa gives the third of maqam Nahawand as the note "Kurd," instead of the note "Nahawand," when he describes the maqam later in the same book (ibid.:49). However, his intention is clear when he initially names the note "Eb minus a comma" as "Nahawand." [23]

When the Egyptian subcommittee at the 1932 Congress decided on a general scale for Arab music, they too included two varieties of Eb, 292.6 and 306 cents above the note C, and stated that the lower one is that of maqam Nahawand; the higher one is that of maqam Hijaz (1934:601). [24]

While some consider Nahawand's Eb to be the only example of the "minus a comma" phenomenon, most carry the idea a step further by applying a nascent rule of consonance: the mode Nahawand has the notes C D Eb F G Ab, Bb or B, c; since the Eb is minus a comma, then the Ab should also be minus a comma in order to kept the two notes "aligned in consonance," i.e. at an interval of a perfect fourth. [25]

	G	Ab-	Bb	c
C	D	Eb-	F	G

The need for two Ab's is expressed in a number of theoretical works including the Egyptian subcommittee's report in the 1932 Congress publication (ibid.) [25], al-Shawwa (1946:13), and al-Sabbagh (1950:173). al-Sabbagh adds, however, that the lowered Ab occurs in maqam Nahawand only when the B is flat (1950:42).

A number of Cairo musicians extend the idea even further, saying that the Bb in maqam Nahawand should also be "minus a comma" in order to keep it a perfect fifth from the Eb (al-Babili personal communication 3/83; A.H. Nuwayrah, personal communication 1/83; al-Kurdi, personal communication

6/15/87). [27]

When al-Shawwa wrote of the need for five additional notes, he was undoubtably guided by some of these same practices and principles, for three of his five additional notes are the notes discussed above: Eb minus a comma (called "Nahawand"), AAb minus a comma (called "qarar Shuri"), and BBb minus a comma (called "qarar Nirz") (1946:13). It is not clear, however, why he places the latter two in the lower octave; present-day discussions of this phenomenon usually refer to notes in the central octave, i.e., Ab and Bb rather than AAb and BBb. [28]

al-Shawwa's two other "extra" notes are Hijaz (F#/Gb) minus a comma, called "Saba", and 'Iraq (BB-b-) plus a comma, called "qarar Rahawi". The former is used in his maqam presentations wherever the note Gb is called for, most notably in maqam Saba, D E-b- F Gb A Bb c db. He uses the note called Hijaz wherever F# is called for and thus recognizes separate positions for F# and Gb, the latter being lower than the former by a "comma." (However, see response number three below where some interpret the note Saba as being higher than F# by a "comma"). [29]

al-Shawwa's 5 additional notes
("-" and "+" refer to minus or plus a comma)

Sabā = (Gb-) (F#-)
Nahāwand = Eb-
qarār Rahāwī = BB1/2b+
qarār Nīrz = BBb-
qarār Shūrī = AAb-

In a series of interviews conducted from November to January, 1983-84, `Abd al-Ḥalīm Nuwayrah, composer and leader of the Cairo-based Firqat al-Mūsīqá al-`Arabiyyah (The Arab Music Ensemble) from its inception in 1969 until his death in 1984, indicated the following instances of "minus a comma" in present-day practice:

Eb- Ab- Bb- in Nahawand (C D Eb F G Ab, Bb or B, c)
Eb- and Bb- in Kurd (D Eb F G A Bb c d)
F- and Bb- in Busalik (D E F G A Bb c d, w/ C# as the L.T.)
BBb- and Eb- in `Ajam `Usayran (BBb C D Eb F G A Bb),
 Shawq Afza (BBb C D Eb F Gb A Bb ...), and other modes.
A- and Bb- in Jaharkah (F G A Bb c d e-b- f) [30]

Some apply Kurd's lowered 2nd and 6th to maqam Hijaz Kar Kurd, considered a transposition of maqam Kurd to C (C Db Eb F G Ab Bb c). This results in Db- and Ab-.

Other musicians, using the terms "wāṭī" or the English "lower," have offered additional examples of slight pitch variation. al-Shashnagi, a renowned qanun maker and semi-professional performer from Cairo, says that the F and Bb of maqam Rast (C D E-b- F G A, Bb and B-b-, c) are lowered a little (personal communication 8/84). Jihad Racy agrees and adds that the F and Bb of maqam Bayyati (D E-b- F G A, Bb and B-b-, c d) and maqam Saba (D E-b- F Gb A Bb c db) should also be lowered slightly.

Reviewing the instances of "minus a comma" proposed by various musicians and theorists, several observations can be made. First, the phenomenon usually affects, not single notes, but rather pairs of notes which stand at a distance of a fourth or fifth from each other. Second, the phenomenon centers around a rather small group of notes (usually Eb, Ab, Bb, F) which function most often as minor seconds, minor thirds, minor sixths, or minor sevenths in their respective maqamat: [31]

m3rd and m6th in Nahawand (Eb & Ab), Busalik (F & Bb),
Bayyati (F & Bb), and Saba (F & Bb);

m3rd, m6th and m7th in Nahawand (Eb, Ab, & Bb);

m2nd and m6th in Kurd (Eb & Bb) and Hijaz Kar Kurd (Db & Ab);

tonic and 4th in 'Ajam 'Ushayran (BBb & Eb), Shawq Afza (BBb
& Eb), and other modes;

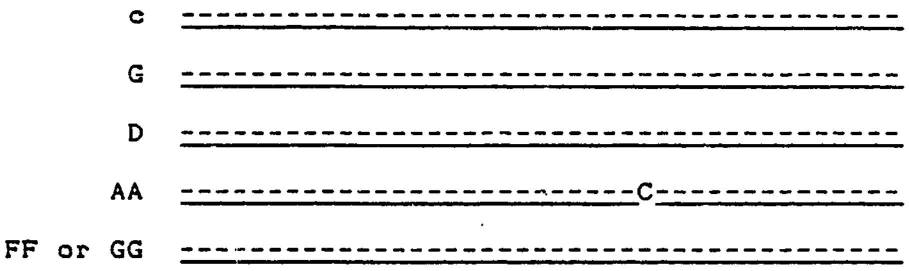
4th and m7th in Rast (F & Bb).

The note positions indicated by the "minus a comma" conceptualization have an interesting relationship with the intervals recognized by the Pythagorean and just systems. Reviewing the Pythagorean and just intervals for the minor pitches, we see that the Pythagorean consistently occurs approximately a 21.5 cent comma below its just counterpart:

		ratio	cents
tonic		1/1	
minor 2nd	P	256/243	90.2
	J	16/15	111.7
minor third	P	32/27	294.1
	J	6/5	315.6
minor 6th	P	128/81	792.1
	J	8/5	813.7
minor 7th	P	16/9	996.1
	J	9/5	1017.6

In the case of minor intervals, then, the "minus a comma" concept might be a way for a musician to signal that he is choosing (on a subconscious level) the Pythagorean interval as opposed to the just. In the case of major intervals, the Pythagorean positions are 21.5 cents above the just. The Pythagorean major third, for example, is 407.8 cents while the just major third is 386.3 cents. Thus, when Nuwayrah indicates a lowered major third in maqam Jaharkah, he may be expressing a desire for the just rather than the Pythagorean third. The theoretical literature surveyed for the present study does not specifically discuss the "minus a comma" concept and thus offers no direct guidance on this issue. [32]

We have, however, one instance where the issue is inadvertently addressed. In support of his idea that the minor third of maqam Bayyati is "slightly lowered," Racy offers the following demonstration using the Arab lute, the 'ūd (personal communication 5/86): after checking that the open strings of the 'ūd are tuned in perfect fourths (AA D G c), Racy plays maqam Bayyati (D E-b- F G ...) transposed to AA (AA BB-b- C D ...) and stops on the mode's minor third, i.e., C. Comparing this C to the c of the open string, one finds, according to Racy, that the note, C, is slightly lower than a perfect octave below the open string's c.



This demonstration offers us a rare chance to analyze the pitch of a variant note: we can label the pitch of the open string AA as 1/1, or 0 cents. The pitch of the other strings, tuned in perfect fourths, are thus D = 4/3 or 498 cents; G = (4/3)^2, i.e., 16/9 or 996.1 cents; and c = (4/3)^3, i.e., 62/27 or an octave above 294.1 cents. This c is the Pythagorean minor third. According to Racy, then, the "slightly lowered" minor third of maqam Bayyati is less than 294.1 cents, i.e., less than the Pythagorean minor third. [33]

c) "Shrunken" Augmented Seconds

A second category of deviation from the quarter-tone system occurs in connection with augmented-second intervals. Although this interval seems to have occurred in various constructions in the past, its use in the modern period is limited to the Hijaz tetrachord and the Nawa Athar/Nakriz pentachord. [34] In both cases the augmented interval occurs surrounded by two half-step intervals:

Hijaz tetrachord: 1/2 step + aug. 2nd + 1/2 step

Nawa Athar/Nakriz pentachord:
whole step + 1/2 step + aug. 2nd + 1/2 step

The Hijaz tetrachord occurs most commonly on D and G, the Nawa Athar/Nakriz pentachord most commonly on C:

D Eb--------F# G
G Ab--------B c

C D Eb--------F# G

According to a large number of Arab musicians, the augmented-second interval is either occasionally or consistently contracted or shrunken. In such cases, the Eb or Ab would be raised slightly (but not to the point where they would become E-b- and A-b-). For many, this is the extent of the "shrunken augmented-seconds" phenomenon. Others, however, hold that in such cases the F# and B are also lowered slightly (but not to the point where they would become F=/= and B-b-). Whether one or two notes are affected, the size of the augmented second is literally shrunken from its full size of one-and-a-half steps or six quarter-steps.

The term "comma" (kūmā) is generally not used in discussions of this phenomenon. Rather, musicians commonly rely on the descriptive words "a'lā" and "awṭā" (i.e., the pitch is "higher" or "lower", respectively) or "yuzayyid" and "yunaqqis" (as in "you must 'raise' or 'lower' the note slightly").

The Hijaz tetrachord also occurs on C (C Db---E F), F (F Gb---A Bb), and A (A Bb---c# d). Other positions for this tetrachord result from less common modal transpositions.

The following is a list of the common maqamat which have augmented-second intervals. (Zingaran and Shawq Afza do not usually appear in lists of "common" maqamat; they have been included here because of their augmented seconds.) The augmented second, Eb to F#, within the modes Nakriz and Nawa Athar occur within a Nawa Athar/Nakriz pentachord on C. The other examples of the augmented second given here are all commonly perceived as occurring within Hijaz tetrachords.

```
Rahat
 al-Arwah  BB-b- C   D Eb-------F# G    A  B-b-
Shahnaz              D Eb-------F# G    A Bb------c# d
Hijaz                D Eb-------F# G    A  B-b- c    d
Nakriz           C   D Eb-------F# G    A Bb     c
Nawa Athar       C   D Eb-------F# G Ab-------B c
Suznak           C   D   E-b- F    G Ab-------B c
Shuri                D   E-b- F    G Ab-------B c    d
Huzam                    E-b- F    G Ab-------B c    d  e-b-
Nahawand         C   D Eb     F    G Ab-------B c
Hijaz Kar        C Db-------E F    G Ab-------B c
Zingaran         C Db-------E F    G    A Bb     c
Saba                 D   E-b- F Gb------A Bb     c db------e f
Shawq     BBb    C   D Eb     F Gb------A Bb
 Afza
```

Three General Approaches to the Concept of "Shrunken" Augmented Seconds

There are three general approaches to the concept of "shrunken" augmented seconds. Some say that all augmented seconds are shrunken, whether they occur in Hijaz tetrachords or Nawa Athar/Nakriz pentachords. Others say that augmented seconds in Hijaz tetrachords are shrunken but not those in Nawa Athar/Nakriz pentachords. Still others believe that the phenomenon occurs in only a few specific instances of the Hijaz tetrachord.

From the comments of a few musicians who hold the latter point of view, it is possible to construct a theory which explains when they believe the augmented-second intervals to be "shrunken." It must be emphasized, however, that most followers of the third approach do not offer explanations for why the phenomenon occurs when it does. For those who believe that the augmented-second interval is "shrunken" in only a few instances, the desire for consonance seems to be the deciding factor. Fārūq al-Bābilī, a professional violinist based in Cairo, expounded this idea using maqam Suznak (C D E-b- F G Ab B c) as an example (personal communication 5/84). Analyzing this scale, al-Babili points out that the Ab of Suznak is lower than what would be needed for it to stand in a perfect fourth relationship with the E-b-. For this, the Ab would have to be A-b-, i.e., one quarter-step higher than Ab. According to al-Babili, it is in order to give the effect that these two notes are in a perfect-fourth relationship that the Ab is raised. It is not, he claims, raised to the point of being A-b- "because then it would be A-b-, whereas the A of Suznak is flat." It is placed between Ab and A-b-. Similarly, the B would have to be lowered to B-b- for it to be in a perfect fifth relationship with E-b-. In order to give the effect of this consonance, the B is lowered, not fully to B-b- (because the B of Suznak is natural, not half-flat), but to a position between B and B-b-. This then is the "shrunken" augmented-seconds phenomenon as it involves both of the delimiting notes. al-Babili adds that this same situation exists in maqam Huzam and maqam Shuri, causing their augmented seconds also to be "shrunken."

```
              small 4th
          |---------------|
                   large 5th
          |--------------------------|

C     D   E-b-   F     G  Ab---------B  c     d   e-b-

|     |   | maqam Suznak                |     |   |
|---------------------------------------|     |   |
      |   |         maqam Shuri               |   |
      |---------------------------------------|   |
          |              maqam Huzam              |
          |---------------------------------------|
```

The same situation occurs in maqam Hijaz but here it appears transposed down a fourth, the augmented second occurring from Eb to F# and the half-flat note occurring below the tonic as BB-b-:

```
    small 4th
|----------------|
        large 5th
|--------------------------|

BB-b-   C     D  Eb--------F#  G     A   B-b-   c     d

              |     maqam Hijaz's central octave      |
              |---------------------------------------|
```

Again, it must be stressed that al-Babili's explanation for the "shrunken" augmented seconds is not a commonly held explanation. The musicians who subscribe to the "shrunken" phenomenon do not generally offer any explanation for its existence; they are musicians and not music theorists.

According to those who believe in the limited occurrence of "shrunken" augmented seconds, other instances of this interval tend not to be affected. Using al-Babili's explanation, we can understand why. In maqamat which have two Hijaz tetrachords or a Hijaz tetrachord and a Nawa Athar/ Nakriz pentachord, a significant degree of consonance already exists between the two halves of the scale so there is no need for the "shrunken" principle to be put in effect; i.e., the notes which define the augmented seconds each have a consonant pair in the other tetrachord:

Hijaz Kar: C Db---------E F
G Ab---------B c

Nawa Athar: C D Eb---------F# G
G Ab---------B c [35]

In the modes which contain the remaining instances of the augmented second, the tetrachord without the augmented-second interval has only whole and half-step intervals (those with half-flats and augmented seconds have been discussed above). In these examples, musicians who follow the "limited occurrence" approach express no urge to "shrink" the augmented seconds. Following al-Babili's theory of consonance, this can be explained because one of the two notes delimiting the augmented second already has a consonant pair in the other tetrachord. The other note which defines the augmented second often stands at the distance of a tritone or augmented fifth from the intermediary notes in the other tetrachord. Perhaps, since the lack of consonance is the result of half-step discrepancies (i.e., the distance needed to render these intervals a perfect fourth or fifth), the act of shrinking the augmented second in an attempt at consonance is considered inappropriate. In other words, the "shrinking" of augmented seconds can be seen as a response to quarter-tone discrepancies only. (In examples where the discrepancy is a half step, the introduction of an accidental note often occurs; see discussion of accidentals in Chapter X).

Nahawand:	C	D	Eb	F		G	
		G	Ab------		B	c	
Zingaran:		C	Db------		E	F	
		F	G		A	Bb	c
Shawq Afza:		BBb	C		D	Eb	
		F	Gb------		A	Bb	
Nakriz:	C	D	Eb------		F#	G	
	G	A	Bb	c			

There are four references to special tunings for Hijaz tetrachords in the literature surveyed for the present study. The first occurs in the report of the 1932 Cairo Congress. A special Egyptian subcommittee decided that Arab music uses a general scale of twenty-six notes per octave, the two "extra" notes being a second Eb and a second Ab. These two notes are are needed in order to play maqam Hijaz (Recueil 1934:601), on D (D Eb F# G ...) and G (G Ab B c ...), respectively. According to these Cairo musicians, then, the concept of "shrunken" augmented seconds affect only the lower of the two pitches which define the augmented second (the F# and B are not changed).

Based on aural tests, the subcommittee came up with "exact" positions for the two extra notes (see Appendix 5 where the subcommittee's methods are criticized), thereby giving us an unusual view of the extent to which these pitches are raised above the norm:

Congress' pitches		Pythagorean	Just
the normal Eb:	292.6 cents	294.1	315.6
Hijaz's Eb:	306.0 cents		
the normal Ab:	797.1 cents	792.1	813.7
Hijaz's Ab:	808.2		

The Eb is raised 13.4 cents while the Ab is raised 11 cents, i.e., about half the size of a Pythagorean comma. Viewed with respect to al-Babili's statements (i.e., seeking to give the impression of having raised the note to a half-flat position), these higher pitches would certainly fail in this regard. The resulting pitches are 11.9 and 16.1 cents above the Pythagorean positions, but still well below the just positions. They are not at all half way between the flat and half-flat positions and would certainly not be able to affect a consonant relationship with a half-flat note found in the second tetrachord.

A second writer, al-Sabbagh from Syria, agrees with the all of the above concerning the contexts in which the augmented second is "shrunken" and when it is not: those in the maqamat Hijaz, Shuri, and Huzam are "shrunken," those in the maqamat Hijaz Kar, Nawa Athar, Nakriz, Nahawand, etc. are not. However, al-Sabbagh describes the phenomenon quite differently from al-Babili and others by speaking in terms of intervals of a comma. [36]

Two recent writers have also incorporated the idea of "shrunken" augmented seconds in their writings. In both cases only the lower of the two notes which define the interval is affected. al-Mahdi and Jabaqji both use the symbol, "ƀ," for indicating the peculiar intonation of this lower note in their transcriptions. Salah al-Mahdi defines the symbol as lowering the pitch 40% of a whole tone (1972:37). (The normal flat sign, "b," lowers the pitch 50% of a whole tone). Forty per cent of 200 or 204 cents is roughly 80 cents; thus al-Mahdi defines the Hijaz tetrachord as having the intervals of roughly 120, 280, and 100 cents. [37]

Jabaqji defines the same symbol as "a flat which exceeds the [regular flat] by a comma or 1/9 of a whole step" (1976:101 and 83). As Jabaqji's general scale is given in terms of quarter-steps, we can approximate the position of his raised note (say the Eb of the Hijaz tetrachord) as c. 23 cents above a tempered minor second or 123 cents. Thus, the two writers are describing similar phenomenon as far as intonation is concerned (120 cents versus c.123 cents).

Jabaqji acknowledges the "shrunken" phenomenon to exist in only two modes, in maqam Hijaz and maqam Rahat al-Arwah (BB-b- C D Eb---F# G A B-b-). He does not acknowledge it in maqam Shuri (1976:97), maqam Huzam (ibid.:67) or maqam Suznak (ibid.:63). Salah al-Mahdi, on the other hand, extends the idea to all instances of the Hijaz tetrachord (1972:36ff.). He does not, however, indicate the "shrunken" interval in instances of the Nawa Athar/Nakriz pentachord. Rather, he says that this pentachord contains the regular intervals "tone, semitone, tone and a half, and semitone" (ibid.:36).

While many musicians and at least four writers acknowledge special tunings for the augmented-second interval, a large number of musicians today do not accept the idea of "shrunken" augmented seconds. `A.H. Nuwayrah, for example, who provided numerous examples of the "minus a comma" phenomenon, claimed that the "shrunken" principle does not exist in modern-day Arab music. He understood it to have been a practice in the distant past; however this practice, he felt, did not carry over to the present day (personal communication 11/21/82). As is the case with other concepts of variant intonation, individual interpretation plays the key role.

Why "Shrunken" Augmented Seconds?; A Historical Perspective

In the present-day theory, the augmented seconds we have been discussing are all described as one-and-a-half-step intervals, i.e., six quarter-steps. This was not always the case in the modern period. Indeed, it was common to describe many of these intervals as containing only five quarters. There are even two examples where these intervals are said to contain only four quarters. Analyzed in terms of the Hijaz tetrachord, the possibilities are as follows:

1 2b --- 3 4	with the intervals 2 + 6 + 2:	D Eb --- F# G G Ab --- B c etc.
1 2-b- 3 4	with the intervals 3 + 5 + 2:	D E-b- F# G G A-b- B c etc.
1 2b 3-b- 4	with the intervals 2 + 5 + 3:	D Eb F=/= G G Ab B-b- c etc.
1 2-b- 3-b- 4	with the intervals 3 + 4 + 3:	D E-b- F=/= G G A-b- B-b- c etc.

From the present-day perspective, the first example can be seen to contain a full augmented second while the remaining examples contain "shrunken" intervals: in 1 2-b- 3 4, the second note has been raised to the point where it is half-flat rather than full flat; in 1 2b 3-b- 4, the third note has been lowered to the point where it is half-flat rather than natural; in 1 2-b- 3-b 4, both internal notes have been moved--the augmented second has been "shrunken" from both sides--so that the resulting interval is rendered a whole step.

Mashaqah, the first of our sources to describe modal practice in the modern period, gives twenty-seven instances of augmented seconds in his presentations of the various modes. [38] Of these, only six are full six-quarter intervals. The majority, twenty-one, are five-quarter intervals with a 1 2-b- 3 4 structure; e.g., D E-b- F# G, G A-b- B c, C D-b- E F, A B-b- c# d, or the unusual B-b- c d=/= e-b-. In Mashaqah's examples al-Babili's principle of attempted consonance is frequently contradicted. The augmented second of maqam Huzam, which we would expect to be "shrunken," is here given as G Ab---B c ([c.1840] 1899:928) while the augmented second of maqam Nakriz, which we might expect to be a full six-quarter-step interval, is here given as C D E-b- - F# G (ibid.:729). In addition, modes with two Hijaz tetrachords are often presented with both being "shrunken." Shahnaz, for example, has D E-b- -- F# G and A B-b- c# d (p.887).

Mashaqah's comments regarding the augmented second of maqam Hijaz are of special interest. He says that maqam Hijaz has D E-b- - F# G, but then adds that performers in his day often use F=/= instead of F#. D E-b- F=/= G was also used in 'Arba' (ibid.:888). These are examples of the 1 2-b- 3-b- 4 structure given above. [39]

The testimony of al-Khula'i (1904:41ff.) shows that the augmented second and Hijaz tetrachords continued to have various definitions in the first years of the twentieth century. Maqam Hijaz is given as D Eb F# G ..., i.e., 2 + 6 + 2. Maqam Hijaz Kar is given as C Db E-b- F ..., i.e., 2 + 5 + 3; this same configuration is found in Shuri and what we today call Huzam, which are presented as containing G Ab B-b- c. Two other modes are presented with the notes D E-b- F# G, i.e., 3 + 5 + 2. And finally, four modes (Suznak, Hijaz Kar, Nahawand, and Nawa Athar) are said to include the notes G, Shuri, B-b-, and c. On an earlier page (p.31) al-Khula'i says that Shuri is an alternative for the note tik Hisar (A-b-); thus, this gives the sequence 3 + 4 + 3. [40]

Mahmud Kamil, writing in 1975, offers a late example of "shrunken" augmented seconds in the literature. The sequence G Ab B-b- c (1 2b 3-b- 4) is found in his desriptions of the maqamat Suznak, Shuri, Huzam, Nahawand, Nawa Athar, and Bayyati 'Araban. Three other modes, Shadd 'Araban, Suzdal, and Shahnaz, are given this structure based on GG, AA, and A, respectively. Kamil also includes one example of the sequence G A-b- B c (1 2-b- 3 4), i.e., in maqam Hijaz Kar. In addition, he gives many examples of the structure 1 2b 3 4, including the D Eb F# G in the modes Hijaz, Rahat al-Arwah, Nakriz, and Nawa Athar, and C Db E F in Hijaz Kar and Zingaran.

Eventually, however, the Hijaz tetrachord came, in the mainstream music theory (in the "middle" and "present-day" periods), to be conceptualized exclusively as 1 2b 3 4. It is not entirely clear why this came about. The change is noted in a small number of the written sources (al-Shawwa 1946:49, 50, 56, and 85; al-Hilu 1972:120 n.2) but no explanations are offered. Based on the many examples of westernization that occurred in Arab music and Arab music theory in the twentieth century (the introduction of Western instruments, solfege, staff notation, music conservatories, etc.), it seems reasonable to suggest that the shift was the result of a desire to match the intervals of Western music as nearly as possible: while the three-quarter-step interval was obviously considered too essential to be absorbed by an alternative representation (i.e., by either the half-step or whole-step), the five-quarter-step interval could, it seems with little harm, be presented as the six-quarter interval found in Western music theory.

Musicians who disagreed with this newly narrowed definition were compelled to come up with their own "performers' terminology" so that they could express their own understandings of the augmented-second interval. The metatheory which performers developed expressed itself in terms of the mainstream theory: the defining notes of the now six-quarter intervals are often indicated as being "raised a little" or "lowered a little." This is what I have referred to as "shrunken" augmented seconds. [41]

It is interesting, in this regard, to consider Jihad Racy's comments concerning the labeling of this modern-day phenomenon as a "shrinking" of the augmented second. Racy has objected to this choice of words because it "gives the impression that the correct model is the [larger] non-shrunken interval" (personal communication 6/86). Considering the numerous statements recorded above in which the augmented second is conceived as something other than 1 2b 3 4, it is imperative that we recognize the modern six-quarter presentation of augmented seconds as an attempt at achieving a more standardized and uniform music theory than previously existed. As mentioned earlier, Wright refers to such an effort as "passing the raw material of practice through a filter of theoretical suppositions" (Wright 1978:2; quoted in Powers 1980:185). Wright came upon this idea from the analysis of the intervals contained in the theories of Safi al-Din and Qutb al-Din. Safi al-Din, with his scale of limmas and commas, was committed to a Pythagorean system of consonances and was thus compelled to ignore the half-flat intervals which, by his own admission, existed in the practice of his time (see Wright 1978:24ff. and Powers ibid.). He was similarly compelled to ignore or misrepresent intervals larger than 8/7 (231.2 cents) as being "unacceptable as an undivided unit within the scale" (Wright, ibid.:55; also see p.133)(A six-quarter augmented second is 300 cents.) Wright concludes that "... the picture [Safi al-Din] presented is an oversimplification, in some ways a formalized abstraction, and that in attempting to confine all the intervals found in practice within the straitjacket of a mathematically coherent (and therefore intellectually respectable) system, Safi al-Din inevitably gave a distorted account of some of them" (ibid.:25). The same can be said for the modern-day presentation of augmented seconds. Distortions inherent in the modern-day presentation are addressed by performers' comments indicating a "shrinking" of this interval.

d) Multiple Half-Flats

A third level of pitch conceptualization beyond the normative twenty-four notes per octave is based on the idea that the half-flats exist in different positions for different maqamat. Among those who espouse this phenomenon, the point of greatest concensus is that the E-b- of maqam Rast is higher than the E-b- of maqam Bayyati. [42] Beyond this, disagreement sets in. A few informants including a leading nay player in Egypt said that there are three positions for the E-b- but they differ as to which maqamat use which positions. One said that Bayyati and Saba share the lowest position, Sikah and Huzam use the middle, and Rast uses the highest. Another said that Rast uses the middle while Sikah and Huzam use the highest tuning. [43] Mahfuz, the only writer to explicitly incorporate this idea into his theories, distinguishes between two E-b-'s positions, which he calls the "small" and the "big" Sikah (Sīkāh saghīrah and

Sīkāh kabīrah, respectively). He takes the unusual step of assigning different symbols for the two notes in his transcriptions: the regular half-flat sign (-b-) indicates the lower pitch (*Sīkāh ṣaghīrah*) which Mahfuz says is six commas above the note D; =b= ($\overset{=}{\flat}$) indicates the higher pitch which Mahfuz puts at seven commas above the note D. In terms of cents, his two half-flat seconds are positioned at 135.8 and 158.5 cents; his two half-flat thirds occur at 339.6 and 362.3 cents (based on 1200/53). Mahfuz indicates *Sīkāh ṣaghīrah* for the following modes: Bayyati (ibid.:330), 'Iraq (ibid.:328), Huzam (ibid.:347), Saba (ibid.:352), and Shuri (ibid.:356); *Sīkāh kabīrah* is given for maqam Suznak (1964:318), maqam Rast (ibid.:321), and maqam Sikah (ibid.:344). [44]

	lowest E-b-	middle E-b-	highest E-b-
Mahfuz:	Bayyati 'Iraq Huzam Saba Shuri		Rast Suznak Sikah
informant:	Bayyati Saba	Huzam Sikah	Rast
informant:	Bayyati	Rast	Huzam Sikah

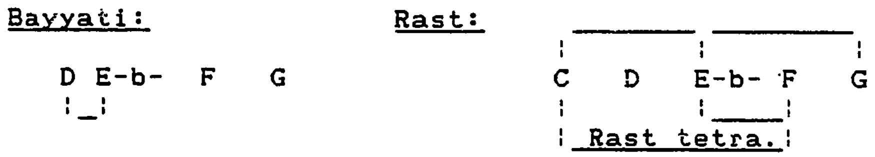
A few other writers have supported the idea of variable half-flats without going into the specifics of which modes are involved and the exact placement of the pitches. Touma comments, "The size of a three-quarter tone is not always fixed; it can vary according to the mode ... The diverse nuances which occur in the value of this interval reckon among the essential elements of [Arab music]" (1977:35). Discussing the symbols for half-flat and half-sharp, al-Mahdi writes, "[The] quarter tone is mobile and the musician should identify the mode in which the piece he has to sight-read is composed in order to assign the position [for the pitch] ... (1972:37; see also Powers 1980:424-25).

The variability of the half-flat pitches can be seen as resulting, in part, from the absence of consonant relationships between these pitches and the other notes of the particular scales in which they occur. This idea is based on the assumption that relationships of consonance tend to anchor a note to a fixed position. (This is not to say that slight variation from this position does not occur in practice.) Analyzing the notes of the Rast and Bayyati scales (C D E-b- F G A, Bb and B-b-, c d; the two modes share the same notes, Rast's tonic being C, Bayyati's being D), we find that all but the half-flats are linked by a cycle of fourths and/or fifths:

A <> D <> G <> C <> F <> Bb

From an acoustical point of view, the half-flats would thus be much more susceptible to variation than the other notes.

This does not explain, however, why Rast's E-b- would be higher than Bayyati's. It might be that the attraction of the tonic D on the neighboring E-b- in Bayyati causes this note to be low in pitch. The E-b- of maqam Rast has no particular attraction to either the tonic or the mode's second most important note, G, as it stands roughly half way between these two pitches (in an equal-tempered scale the E-b- stands at 350 cents, exactly half way between the tonic and the fifth of 700 cents). The note F, the upper boundary note of Rast's first tetrachord (C-F), might play an important role by pulling up the neighboring E-b- to its higher position.



It should be emphasized that many musicians insist that there is only one position for the E-b-, no matter what the maqam. (As with the other ideas discussed in this section, it is common to find musicians who perform together and yet disagree whether this idea is valid or not. They play music together, yet they conceptualize their shared music differently!) When asked if the E-b- is a little higher in maqam Rast than in maqam Bayyati, Nuwayrah (see "minus a comma" discussion above) responded, "No, it's exactly the same, not higher" (personal communication 11/21/82). Another responded, "Sikah doesn't change. Sikah is Sikah." This is obviously the stance of the various theorists who present the general scales discussed in Section A of this chapter, for they were all content to give a single value for E-b- and the other half-flat and half-sharp positions. Similarly, the Egyptian subcommittee at the 1932 Congress felt the need for two versions of Eb and Ab but were satisfied with one position for each of the half-flats. And lastly, al-Sabbagh, whose ears are sensitive enough to perceive a difference between the intervals D to E-b- and E-b- to F (a difference which he says is half a comma or 11.3 cents; see Appendix 6), assigns the very same E-b- to all the modes that need this note (1950:41ff.).

There is another aspect to the issue of variable half-flats: some have claimed that half-flats vary, not from one maqam to another, but from one region to another. One musician in Cairo recognized four regional tunings for the note Sikah. "The lowest Sikah is here in Egypt. You go to Lebanon and Palestine, the Sikah is a little higher. In 'Iraq, it is still higher, and in Istanbul, it is E natural." However, this musician asserted, there is only one position for this note within each of these four areas. The idea of regional variation was also expressed at the 1932 Congress within the Commission on the Musical Scale. Examples of Egyptian scales and musical phrases were played for the assembled musicians "who declared that it was indeed the actual Egyptian music. The same experiment was made for Turkish and Syrian music. The Egyptian musicians said that it was not their music, and in particular, found the Sikah to be too high" (Recueil 1934:595). Elsewhere in the same publication it is stated that the notes Sikah and Awj of Turkish, Syrian, and Iraqi scales are "a little higher" than those of the Egyptian scale (ibid.:596).

Although this regional variation is widely acknowledged, a number of writers have either denied its existence or else expressed the feeling that regional variation has died out or is dying out in the twentieth century.

> The Egyptian influence is beginning to be felt in Syria. By the voice of its artists, by records and radio transmissions, Cairo, having become the principal center of Arab culture since the beginning of this century, spreads to Beirut, Jerusalem, and Damascus the taste for artificial nuances and for temperament which tends to make uniform the small intervals of the general scale. (D'Erlanger [c.1932] 1949:30)

Some twenty years later, al-Sabbagh wrote,

> ... there is no truth in what some believe, namely that the three-quarter steps are a little higher in some Arab countries than they are in other Arab countries. This is an erroneous impression which denies reality especially in the present period when one country exchanges melodies with another country by means of listening to the radio and the cinema and records, etc., so that there does not remain any room for differences in the modes. He who [learns] a melody aurally will sing it according to the original as he heard it because it is not possible that he memorize it except if he heard

> it several times and it is impressed in his mind as it was imprinted on the record; so there remains no likelihood for any change in the melody. (1954:49)

al-Sabbagh did, however, admit that the Turkish half-flat positions are higher than those of the Arab half-flats (1950:33). [45]

e) Variable Pitch; a Function of Both Tonal Focus and Personal Preference

A number of musicians and theorists believe that there is no one position for each note, that the pitch of a given note in a given mode will vary for a variety of reasons. Racy, for example, teaches the students in his Near East performance ensemble that "basically, none of the notes are fixed; in various degrees, they are all flexible" (10/27/88). The two most commonly mentioned reasons for this phenomenon are tonal focus and personal preference.

Racy offers numerous examples where the pitch of certain notes varies according to tonal focus or melodic direction: The E-b- of maqam Bayyati is lower in phrases focusing on D, higher in phrases focusing on G. The phrase F E-b- D E-b- D, F G - F E-b- -- D, for example, has a lower E-b- than the phrase F E-b- F G G G G G. Similarly, the note A in maqam Rast or maqam Hijaz is higher when the focus is in the higher octave, but lower when the focus is on a lower note such as

G (Racy, ibid.). [46]

Intonation can also vary as a result of personal preferences or the aesthetic impulse of the moment. Maḥmūd Kāmil, for example, a Cairo ʿūd player and music teacher, teaches his students that

> ...the intonation of a given note depends on the performer's feelings ... No one can give the right understanding of Arab music in words because the notes and the modes depend on personal taste. The written notes do not represent the music. The singer can sing a different variety of a given note every time he comes to this note. To understand and be able to listen to this music requires a special training and sensitivity. (personal communication 6/2/87)

al-Sabbagh includes a number of examples of personal approaches to intonation. For maqam Bayyati he suggests that "... to show it well and to create tarab [enchantment], it is advisable to raise the [F] slightly ... and also to lower the [G] slightly" (1950:47). Some, he adds, raise the E-b- and produce a Bayyati that is close to the mode 'Ushaq Masri (D E F G ...) but al-Sabbagh does not agree with this practice: Bayyati should have the regular E-b- (ibid.). Regarding maqam Saba, al-Sabbagh writes that "if you raise the [F] slightly it becomes more affective but this [can be done only] temporarily and not always" (ibid.:49).

f) Extra Notes in Theories of the Syrian School

The previous four concepts of variant intonation (numbered two through five) are all empirically based. There is no attempt to affix precise intonational values (cents, frequency ratios, etc.) to either the standard twenty-four pitches or to any variant pitches. The Syrian school of music theory stands in contrast to the above by assigning specific positions for all the pitches, including additional pitches beyond the standard twenty-four, on the basis of fifty-three commas per octave (see Section A.3 of this chapter). The theories of `Ali al-Darwish offer an example of this approach. `Ali al-Darwish names thirty notes per octave (D'Erlanger 1949:29). Five of the six "extra" notes can be explained as follows: the octave scale, GG to G, is divided whole step, whole step, half step, whole step, whole step, half step, and whole step. The whole steps are nine-comma intervals. Within each whole tone, separate notes are placed at the fourth and fifth commas, giving two distinct positions, one comma apart, for the notes AAb, BBb, Db, Eb, and F#. These extra notes can also be explained as the difference between enharmonic notes in the Pythagorean system, i.e., the difference between GG# and AAb, AA# and BBb, C# and Db, D# and Eb, and F# and Gb. [47]

Another example of a Syrian theorist assigning specific intonational values for "extra" notes is Majdī al-`Aqīlī's statements concerning the comma subdivisions of the whole step, D to E (this information is presented by Ibn Dhurayl, 1969:78). al-'Aqili says that most of the comma intervals which exist between the two notes are used for specific maqamat. Of the nine commas (D being the zero comma position, E natural the ninth comma position), al-'Aqili says that maqam Hijaz uses the third, maqam Bayyati the fourth, maqam Huzam the fifth, maqam Sikah the sixth, maqam Rast the seventh, maqam Busalik Sha'ar the eighth, and maqam Busalik the ninth. Ibn Dhurayl makes it a point to call these ideas a "novelty". Indeed, it would be negligent on our part if we did not question at least some of these assigned values. al-'Aqili says that the E-b- s of Bayyati and Huzam occupy the fourth and fifth comma positions, respectively. However these two positions are commonly acknowledged to be flat positions rather than half-flats: the fourth comma is the Pythagorean minor second (90.2 cents); the fifth comma (113.2 cents) is just one and a half cents above the just minor second (111.7 cents). It would seem that the only full-comma positions available for the half-flat notes are the sixth and seventh commas (i.e., those used by Mahfuz in his theories; see Response 4 above). The six-comma interval gives low half-flats of 135.8 cents; the seven-comma interval gives a 158.5-cent half-flat. The eighth comma (181.1 cents) is used by modern Turkish music theory for its half-flats, but it is generally considered inappropriate for describing the Arab half-flat. (It will be remembered that al-Sabbagh assigns his half-flats to the six-and-3/4-comma position, giving half-flat seconds of 152.8 cents. 'Ali Darwish assigns his half-flats to the seventh comma position.) [48]

With al-'Aqili's theories, we conclude this section on additional pitches beyond the standard twenty-four per octave. al-'Aqili's theories are an appropriate way to end, not because they are necessarily accurate or representative, but rather because they are idiosyncratic. As such his ideas represent the dozens of idiosyncratic theories of variant intonation that are espoused by individual musicians and theorists throughout the Middle East. In this section we have seen an important aspect of Arab music theory. There are many elements of Arab music theory which are universally accepted throughout Egypt, Syria, Lebanon, and other countries in the region. However, there is no one monolithic version of the theory which reigns as the "official" theory. Arab music in general, and the quarter-tone scale in particular, allow for individual interpretation. Thus, it is in keeping with the overall nature of Arab music that individuals have the freedom to develop their own theories of intonation beyond the standard quarter-tone system. The six approaches to the question of variant intonation and additional pitches given above do not attempt to include every instance of variant tuning. They do, however, include what we would consider to be the main conceptual schemes within which these variant intonations are conceived.

As discussed above (Section A.4.d), the quarter-tone scale has never served to confine Arab musical practice. Racy recognizes this point when he refers to the quarter-tone scale as a "referential" scale (1983b:131). D'Erlanger similarly noted that the quarter-tone system leaves "to the musicians having ears particularly sensitive to subtle nuances the liberty to deviate a little from this arbitrary division" (1949:73). D'Erlanger captures the true nature of the Arab general scale in the following passage:

> The first preoccupation of the music theorist ... is to summarize, to classify the characteristics observed in practice ... To establish a series of notes which would be the synthesis of all [the] intervals is therefore the first worry of the music theorist. From this need to coordinate these characteristics ... is born the idea of a general scale of the notes characteristic to such and such a music--an essentially theoretical idea, as that of the alphabet which is the synthesis of all the phonemes used in the language of such and such a people.
>
> Whatever the procedure employed, whatever the care taken by the theorist to express the specific characteristics, this synthesis of the musical intervals cannot be accomplished without a certain arbitrariness. Many differences, however characteristic, must sometimes be sacrificed so that the characteristics born often from empiricism can be contained in such and such a theoretical framework, united in a logical and uniform system (1949:1-2).

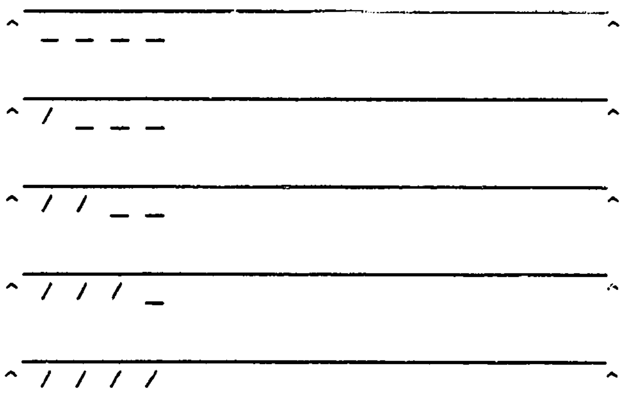
Arab musicians have accepted the quarter-tone system but have developed their own metatheory so that they can refer to aspects of intonation that this system has overlooked.

2. Can the "Extra" Notes Be Played on Today's Arab Musical Instruments

We are left with an important question: "Can the 'extra' notes (such as the second Eb and Ab, Bayyati's E-b- versus Rast's, or the Gb which differs from the F#) be played on today's Arab musical instruments?" That is to say, "Are the concepts of variant intonation discussed in this chapter realizable in performance or are they confined to the realm of a performers' theory?" As far as the fretless ʿūd, violin, cello, and contrabass are concerned, the "extra" notes are all readily available. The nāy player can also affect slight changes in pitch by changing his embouchure or by "half-holing." [49] With the qānūn, organ, and accordion, however, any extra pitches require special attention on the part of the instrument maker or tuner.

The series of levers (ʿurab) which were added onto some qānūns at the beginning of this century (see note 20) have since become a standard feature on all qānūns. Only four ʿurab are needed per course of strings in order to produce the standard twenty-four notes per octave: when all four ʿurab are down, a given course of strings produces the flat; when one ʿurab is up, the pitch is half-flat; when two are up the strings give the natural; when three are up, the half-sharp; and when four are up, the sharp.

four ‘urab on a qānūn's E string:


all 4 down = Eb
one up = E-b-
two up = E
three up = E=/=
four up = E#

When setting these ‘urab on newly made qāúnūns, qānūn makers say that they strive for an equal-tempered placement of the pitches (personal communication from two Cairo qānūn makers, al-Shishnāgī and Rabī‘). Qānūn players acknowledge that they generally tune their instruments to a "generic" tuning, i.e., a tuning with which all the modes can be played in acceptable intonation. They also say, however, that they can and do occasionally tune their instruments not to the generic tuning but to the specific mode they are about to play. Bayyati, for example, might be given a slightly lowered E-b-, Rast a slightly higher E-b-. [50]

In response to the widespread perception that Arab music requires more than the standard twenty-four notes per octave, qānūn makers commonly offer to place additional ‘urab on their qānūns. In his company's brochure (obtained in 1983), al-Shishnagi offers qānūns with six, eight, and ten ‘urab per course of strings. Six _`urab_ give a second version of the full-flat and a second version of the half-flat. The two full-flats produce the "minus a comma" Eb of maqam Nahawand and the raised Eb of maqam Hijaz (giving its "shrunken" augmented second, Eb to F#). As for the two E-b-'s, the lower is for maqam Bayyati, the higher for Rast. A second qanun maker, Rabi`, commonly places five _`urab_ per course of strings. The extra _`urbah_ is for the higher version of the flatted notes. [51]

Electric organs are now a common instrument in Arab music. In order to accomodate the half-flats and half-sharps many organs have twelve levers, each of which changes a particular half-step to a quarter-step position throughout the range of the instrument. For example, by raising the Eb lever the Eb keys on the organ all produce the note E-b-. Some organs also have a dial with which the performer can tune the quarter steps. However, all twelve quarter steps are tuned by one dial, i.e., they cannot be individually tuned. [52]

The most-recent generation of programmable synthesizers extends the range of possibilities for playing desired instances of "variant" intonation. The EK 22, produced by ELKA, is such an instrument. It is equipped with an "Arabian Scale Setting parameter [which] extends the versatility of the instrument ... towards oriental music, in that it gives the possibility of obtaining any kind of Arabian scale with different tones" (quoted from an advertising brochure). When you choose program #63, twelve buttons are activated so that, when pushed, they raise the pitch of one of the twelve keys per octave by one quarter-step. This gives preset equal-tempered quarter-steps. However, you can also set the quarter-steps individually by choosing another feature. This feature offers eight positions above and eight positions below the preset quarter-steps. Thus, the performer can choose any one of seventeen positions for each quarter-step. When using this feature the musician must individually set all the quarter-steps. Different settings can be saved and then recalled whenever needed. Using this feature, then, the musician is given the ability to tune his notes for each and every maqam if he so desires.

Accordions used in Arab music are all imported from Europe. There are two or three specialists in Cairo who add the quarter tones to these instruments. Minimally, they add E-b-, A-b-, and B-b-. The Eb key will produce Eb when the bellows are contracted, E-b- when the bellows are extended. Examples of variant tunings for any one note are rare. I have, however, seen one instrument with two versions of B-b-. The two versions are placed in different octaves.

The above examples of instruments which produce notes beyond the standard twenty-four per octave are important evidence that the concepts of variant intonation discussed in this chapter are not confined to the realm of music theory. Musicians feel the need for these extra notes; instrument makers and tuners have responded to these needs.

NOTES FOR CHAPTER IV

1. See, for example, the modern Turkish system which, although made up of twenty-four notes per octave, is not a "quarter-tone" system. See also the theories of `Ali Darwish and others of the "Syrian school" discussed below.

2. This recalls al-Farabi's (d.950) description of a pre-Islamic system of intonation based on the "tanbur Baghdadi" (see D'Erlanger 1930:227).

3. Mashaqah's use of the term, <u>rub`</u> (pl. <u>arbā`</u>; i.e., quarters) is also significant in this regard.

4. Concerning the note Sikah, Dhakir wrote, "It is diminished a quarter of an interval from the true position of si natural" (quoted in al-Khula`i 1904:33 and Rouanet 1922:2752).

Shawqi (1969:7 and 25) incorrectly credits Dhakir with being the first Arab writer to "seriously" discuss the Arab scale in terms of quarter tones. On the contrary, the scale was described in such terms by earlier Syrian-based writers (al-`Attar and Mashaqah) and by the Egyptian Shihab al-Din (c.1840). Significantly, Dhakir wrote his treatise in Cairo only two or three years after the publication (in Cairo) of Shihab al-Din's work in lithograph form (Mashaqah's treatise was not published until four years after Dhakir's work appeared).

On the basis of Shawqi's comment about Dhakir, Racy (1983:166) writes, "Apparently under the inspiration of the equal-tempered twelve-semitone division of the West, Muhammad Dhakir, and later Muhammad al-Khula`i, devised an Egyptian octave scale consisting of twenty-four equal parts." In fact, al-Khula`i's 1904 presentation of the quarter-tone scale relies almost exclusively on exact or near-exact quotes (without citation) from Mashaqah (finally published in 1899) and Shihab al-Din.

5. Ronzevalle does not explain how he arrived at the frequency values and string lengths. His figures are each within one cent of those of equal temperament. The frequency value for the note Kawasht (si/BB), however, is incorrectly recorded in all three published versions of this table. The error is revealed by comparing the frequency figure with the string length value given for the same note.

6. See, for example, Moustapha (1887) and Raghib and al-Khula`i (in al-Khula`i 1904:32v). These are discussed below.

7. Shawqi (1969:17) reports that some members of the first conference expressed the opinion that instrumental music follows a tempered scale, but that vocal music does not.

8. Shawqi's 1969 work is an important exception to this statement.

9. One indication that the scale is assumed to be tempered is the fact that enharmonic notes (F sharp and G flat, for example) are commonly presented as being one and the same note. In non-tempered systems, enharmonic notes differ slightly from one another.

10. It speaks to the lack of clear separation between Turkish and Arab musics that ʿAli Darwish was trained in Turkey and yet was considered to be a performer of Arab rather than Turkish music. ʿAli Darwish was one of D'Erlanger's main informants (see D'Erlanger 1949:378-381).

11. The sole exception to this statement in the written sources for the present study is Mashʿal who analyzes seven modes using commas on a single page in his work (Mashʿal, *al-Tafsīr*, p.98). His comma figures match al-Sabbagh's "rounded-off" figures. Among those interviewed in Cairo, Mahmud Kamil, an *ʿūd* player and music educator, also discussed Arab music theory in terms of commas. See Section B of this chapter for a discussion of the use of the term "comma" in present-day Egypt as an indicator of slight variations of pitch.

12. It is surprising that Arian (ʿAryān)(1924), in his brief survey of modern scalar theories, does not mention Mashaqah. Indeed, most Arabic theory books fail to mention Mashaqah, despite the fact that Western scholars consistently emphasize the importance of Mashaqah's work.

13. The cents figures in this table were produced by a computer program developed by Jim Arnold which calculates cents figures from frequency ratios or sounding string/whole string ratios. A version of this table also appears in D'Erlanger (1949:40) and Rouanet (1922:2752).

14. Recent Western scholars have generally been skeptical of the assertion that the Arab scale is equal tempered. Touma, for example, considers pitch variability to be an important part of Arab music. The "suppression" of this aspect of the music "by the introduction of the tempered scale ... is equivalent to the destruction of an essential element of this musical tradition" (1977:35). See also Jargy (1971:55) who speaks against equal temerament.

15. Another system of intervals, later termed that of the "just" or "natural" scale, also falls within the category of rational pitches. In its most common form, it differs from the Pythagorean system by adding the 5/4 third to the list of fundamental and generating intervals.

16. It is not as easy to confirm or deny a place for just intonation in modern-day Arab music. There is nothing in the common tuning procedures to indicate the use of just intonation. There are, however, a number of instances where musicians indicate the need for a slightly raised or lowered tuning for a specific note. It is possible, in these instances, that musicians are indicating a preference for the just note over the Pythagorean or vice versa. See Section B.2 of this chapter.

17. As it is commonly defined, the Pythagorean system isolates twelve pitches per octave plus the octave note. In Turkish music theory (see D'Erlanger 1949:27), the Pythagorean system is used to generate twenty-four (+ 1) notes per octave. In either case the Arab half-flat and half-sharp intervals are not accounted for.

The just system, as it is commonly defined, is limited to those notes which are generated by the intervals of the octave, fifth, fourth, and 5/4 third and which have small-number ratios.

18. Jorgensen writes that "by 1577 Francisco Salinas described the equal temperament system used [in the West] in the twentieth century. In 1585 Simon Stevin calculated the intervals and mathematics of equal temperament" (1977:7). Partch says that Marin Mersenne (1588-1648) "is widely known as the first Westerner to give the correct mathematical solution for [12 tone] equal temperament" (Partch 1974:381-82). However, the system was not widely adopted in Europe until the eighteenth and nineteenth centuries.

19. Touma has expressed a similar idea: "This interval of three-quarters of a tone [which occurs four times in each octave of the fundamental Arab scale] is precisely that which, in the 19th and early 20th centuries, caused musicians, as well as theorists, to undertake the empirical division of the octave into twenty-four tones" (1977:39-40).

In light of Mashaqah's documentation that twenty-two of the twenty-four notes per octave were used in his day, then the twenty-four-tone scale can be seen as an attempt to fully incorporate all the intermediary notes into a standardized music theory. (See Villoteau's comment, p. 71 above, on the informal manner with which pre-modern musicians referred to these notes.)

20. Jorgensen suggests that it was not only the prevalence of "tied" instruments that helped equal temperament to take hold in the West (1977:11-12): After metal bases were introduced into pianos starting in 1799, the tension on the strings was increased to such an extent that professional piano tuners were needed for the first time outside of the piano factory.

> Ordinary musicians and amateur tuners of the nineteenth century generally could not tune real equal temperament. When the full-time professional piano tuners became established, true equal temperament became available to the music world for the first time. In other words, since ... [piano tuners were now] specialists, it was not impractical for them to accept the additional challenge of equal temperament...
>
> The acceptance of metal [braces] and equal temperament was the direct cause of the fall of the old practice of musicians tuning their own pianos. (ibid.:12)

There are one "traditional" and two "modern" exceptions to the statement that Arab instruments are not tied to a specific tuning system. The *qānūn* is a zither with seven triple courses to the octave. Sometime before the 1930s, a series of levers began to be added to the *qānūn* allowing the *qānūn* player to change the tuning of his instrument without retuning the strings. (Such levers were present in at least some of the *qānūns* at the 1932 Congress; see pictures #17 and 18 in the Congress publication, *Recueil*). The system of levels, called *ʿurab* (s. *ʿurbah*), commonly provide five alternative bridges for each course of strings, giving, progressively, the flat, the half-flat, the natural, the half-sharp, and the sharp. With the addition of these levers the *qānūn* maker became a determiner of pitch in the somewhat the same sense as the piano tuner. (The *qānūn* player can, however, make fine adjustments in intonation by retuning a course of strings. See the discussion at the end of Section B of this chapter on the *ʿurab*, especially the practice of placing "extra" *ʿurab* on some *qānūns*.)

The two examples of modern Arab instruments tied to a specific tuning are the organ and the accordion. In both cases the instrument maker or tuner commonly decides the tuning of the pitches the musician will play. Possibilities for fine tuning the organ are discussed below (see Section B of this chapter).

21. Spector apparently asked her informants to play the general scale and then analyzed the resulting pitches (1970:247-248). Her findings are not to be taken seriously.

22. Mashaqah, our main source for nineteenth-century modal practice, gives maqam Nahawand as starting from G (Nawa) instead of C; he does not indicate either a lowered minor third (Bb) or a lowered Eb ([1840] 1899:930).

23. `Ali Darwish and al-Sabbagh, theorists of the Syrian school, also state that there are two Eb's separated by a comma, but here the comma is a specific interval of 22.64 cents (this figure is based on 53 commas per octave). `Ali Darwish calls the lower note "Kurdi-Nahawand" and the higher "Kurdi-Hijaz" (D'Erlanger 1949:29); al-Sabbagh calls the two notes "Kurd wati" and "Kurd `ali," i.e., the low and high Kurd, respectively (1950:173). In both cases, the lower Eb is the thirteenth comma above the note C, i.e., 294 cents. The higher Eb is the fourteenth comma, i.e., 317 cents.

24. In the subcommittee's report, however, the lower Eb is called the "normal" position; the higher Eb is considered to be the exception. This can be explained, in part, by the pro-Pythagorean bias of Collangettes and others at the Congress (Collangettes chaired the Egyptian subcommittee): the lower Eb (292.6 cents) is almost identical to the Pythagorean minor third of 294.1 cents (32/27). It can also be attributed to another common example of variant intonation where the Eb of Hijaz tetrachords (D Eb F# G) is considered to be raised slightly above the norm (this is discussed below as Response Number 3).

25. This was first pointed out to me by Faruq al-Babili, a Cairo violinist, during a series of private music lessons in 1983. See the discussion of alignment in <u>`Ūd</u> fingerings in Section A.4 above.

26. The Egyptian subcommittee's formulation of the general scale included twenty-six notes to the octave, the two extra notes being a second Eb and a second Ab (1934:599ff.; see Appendix 5). In his presentation of the Egyptian subcommittee's scale, D'Erlanger (1949:42) transposed the scale down a fourth, apparently in an effort to present all of the examples of theoretical scales as starting from GG. By so doing, the two extra notes appear, not as Eb and Ab as is the case in the Congress publication, but as BBb and Eb.

27. In a scale such as that of maqam Nahawand in which the notes are all linked by a series of fourths and fifths, the lowering of one note could well result in the subsequent lowering of all the notes. For example, the lowered Bb might result in a lowered F, which would then affect the C, the G, and the D in turn. When asked about this point, al-Kurdi stated that the lowering is not passed on to the F. The resulting lack of a perfect fourth between the Bb and F is

not considered to be a problem.

G Ab- Bb- c
C D Eb- F G

This lack of perfect consonance between the notes Bb and F also appears in al-Khulaʿi's discussion of ʿūd fingerings (1904:50-1). Although he does not use the "minus a comma" terminology, al-Khulaʿi indicates that some play the note Bb a little lower than a perfect fourth above the note F. BBb is also given as lower than a perfect 4th below Eb. As will be seen in the next pages, a lowered Bb is said to occur in a number of maqamat besides Nahawand.

28. Unfortunately, al-Shawwa does not comment on when these additional notes are used beyond the contexts which are implied by the names he has given these notes; i.e., one would expect them to appear within maqam Nahawand, maqam Shuri (D E-b- F G Ab B c d), and maqam Nirz (C D E-b- F G A-b- Bb c), respectively. However al-Shawwa seems to be restrained by a sense of conservatism when it comes to his descriptions of the individual maqamat for here he uses only the traditional note names (with one exception, discussed below). The Eb, Bb, and Ab variants are not mentioned in his discussions of the individual modes (see his discussions of the modes Nahawand, Shuri, and Nirz; 1946:49, 64, and 58).

As mentioned above, instances of variant intonation are often a matter for individual interpretation. Here it is interesting to note that many writers and musicians disagree with al-Shawwa on the note called Shuri. While al-Shawwa says that this note is Ab minus a comma, others say that it is Ab plus a comma (see discussion below of Response 3).

29. al-Shawwa's "qarar Rahawi" is probably meant to occur in maqam Rahawi although he himself does not discuss a maqam of this name. Muhammad (1984:37) describes maqam Rahawi as having the notes of maqam Rast except that it uses BB instead of BB-b- at the final cadence. al-Shawwa apparently interpreted this note as a slightly raised BB-b- rather as BB. al-Khulaʿi (1904:32v) gives Rahawi as an alternative name for the note nim Kawasht (his BB), but he too gives no statement as to the context in which this note appears. Other writers mention a maqam Rahawi but include in it only BB-b- and not BB or a raised version of BB-b- (see the Congress publication 1934:555; al-Sabbagh 1950:48; D'Erlanger 1949:186; Surur 1986:124; etc.).

30. It must be understood that these examples represent one individual's opinion concerning an aspect of conceptualization that is commonly ignored in the mainstream theoretical works. Contradictory opinions concerning some of these notes are not uncommon. For example, Jihad Racy says that in traditional, especially vocal, music, the Eb in Kurd is usually "on the high side" (personal communication 5/86). Similarly, al-Sabbagh comments that Kurd's Eb should not be lowered (1950:44).

31. But not when these notes are part of an augmented-second interval, as in the following examples: 2b - 3; 3b - 4#; and 6b - 7. Augmented seconds are discussed in Response 3 below.

32. In the literature reviewed for the present study, only the Egyptian committee at the 1932 Congress and the Syrian theorists `Ali al-Darwish and al-Sabbagh assign quantitative values for the positions of "lowered" notes. The Egyptian committee gave the lower Eb as 292.6 cents and the lower Ab as 797.1 cents. The former is slightly less than the Pythagorean minor third of 294 cents, but the latter is higher than the Pythagorean minor sixth of 792 cents. The Syrian theorists give the Pythagorean figures for their lowered Eb and Ab.

	Pythag.	Just	Congress	Syrian
m3rd:	294	315.6	292.6 and 306	294 and 317
m6th:	792	813.7	797.1 and 808.2	792 and 815

33. When Bayyati is played in the octave on A instead of AA, then the musician is "stuck" with the fixed tuning of the open c string. In such cases, musicians tend to compensate by raising the two lower (stopped) pitches, i.e., the tonic A and the B-b- (Racy, personal communication 5/86).

34. al-Hilu mentions the following two tetrachords as "old" and "not used in our time" (1972:83):

a) Yakah qarar Hisar `Ajam `Ushayran Zirkulah
i.e., GG AAb BBb C# (half step + whole step + augmented second).

b) `Ajam `Ushayran Zirkulah Dukah Kurd
i.e., BBb C# D Eb (an augmented second followed by two half steps).

Besides the Hijaz tetrachord and the Nawa Athar/Nakriz pentachord, D'Erlanger also mentions three other tetrachords which include an augmented-second interval in his description of modern practice (1949:88ff.): Awj Ara with intervals of 3/4, 6/4, 1/4 or 3/4, 6/4, 2/4; Sipahr with intervals of 6/4, 2/4, 2/4 + 4/4; and Sazkar with 6/4, 1/4, 3/4 + 4/4. D'Erlanger admits that the first two are "very rarely used" (ibid.:90), and that he had to come up with his own name for the Sipahr tetrachord. The Sazkar tetrachord is discussed in Chapters V and VI below.

35. Maqam Saba is a special case in which there are two Hijaz tetrachords. With D as tonic, the construction of this maqam extends up the scale, not to the octave, d, but rather to db. When one wants to explore the range above the db, one plays a Hijaz tetrachord from c (c db e f). Thus, while the first octave of the maqam (D to db) has only one Hijaz tetrachord, the extended range of the maqam includes a second Hijaz tetrachord. The existence of the second Hijaz tetrachord might allow us to suppose that the "shrunken" principle should not be in effect; however, some claim that the augmented second of the F Gb A Bb tetrachord is indeed "shrunken".

Saba: D E1/2b F Gb------A Bb
c db------e f

Racy adds, however, that only the Gb seems to be affected here (it is raised slightly); the A, a fifth from the tonic, is not lowered in this case (personal communication 5/86).

As mentioned above, there is no unanimity of thought concerning these additional concepts of variant intonation. al-Shawwa, for example, states that the Gb of maqam Saba is lowered (*nāqis kūmā*) rather than raised (see the previous section on the "minus a comma" concept).

36. al-Sabbagh assigns the value of 13 commas (294.3 cents) to the larger augmented seconds and 12 commas to the smaller interval (271.7 cents), his commas equaling 22.6 cents, the result of 1200/53. He achieves these two intervals by using two variants of Eb, F#, Ab, and B. The lower versions of Eb and Ab (called *Kurdī wātī* and *Hiṣār wātī*; 1950,173) are reserved for instances of the "minus a comma" phenomenon. All instances of the augmented second use the higher Eb and Ab (*Kurdī ʿālī* and *Hiṣār ʿālī* (ibid.). Thus, it is with his choice of one of the two F#'s and B's that he renders a given augmented interval either "shrunken" or not.

In the following table, based on al-Sabbagh (1950), Nahawand with Bb (Nah.), Hijaz Kar Kurd (HKK), and ʿAjam are seen as using the lower varieties of Eb and/or Ab. Modes which have an augmented second--Nawa Athar (N.A.), Nakriz, Hijaz Kar (HK), Nahawand with B natural (Nah.), Hijaz, Shuri, and Huzam--all use the higher varieties of Eb and/or Ab. The first four of these modes use the higher of the two varieties of F# and/or B; thus, their augmented seconds are not "shrunken." The latter three use the lower of the two varieties of F# and/or B; thus their augmented seconds are "shrunken":

294.3	Eb-	Nah.	HKK	Ajam				
317.0	Eb				N.A.	Nakriz	Hijaz	
					/--\	/--\	{*}	
588.7	F#				\--/	\--/	Hijaz	
611.3	F#+				N.A.	Nakriz		
792.5	Ab-	<Nah.>	HKK					
815.1	Ab	Nah.			N.A.	H.K.	Shuri	Huzam
		/--\			/--\	/--\	{*}	{*}
1086.8	B-	\--/			\--/	\--/	Shuri	Huzam
1109.4	B	Nah.			N.A.	H.K.		

{*} = shrunken aug 2nd of 12 commas

/--\ \--/ = unshrunken aug 2nd of 13 commas.

Note: <Nah.> is an alternative position for Nahawand's Ab; this is used when there is Bb instead of B.

In addition, al-Sabbagh gives Hijaz Kar and Zingaran (which he calls Zinkulah) as having a large augmented second from Db - E. Saba's augmented second, Gb - A, is also given as a large interval of 13 commas. al-Sabbagh gives no clear statement regarding the augmented second in maqam Suznak: he does say that Suznak has Hijaz on G (C D E-b- F G Ab - B c), thus we might assume it to have Hijaz's smaller Ab - B interval.

37. al-Mahdi does not write in terms of cents; rather he gives the intervals of the Hijaz tetrachord as "60/100 of a tone, 140/100 of an tone, [and] a semitone." (ibid.:36).

38. Mashaqah did not mention tetrachords and thus never refers to the Hijaz tetrachord or the Nawa Athar/Nakriz pentachord by name. Instances of augmented seconds are discernable from the notes he indicates for each mode.

39. With E-b- and F=/=, Hijaz has is a perfect fourth and fifth for its BB-b-.

40. In the present-day, the name Shuri is commonly associated with Ab rather than A-b- (see al-Hilu 1972:69). In a similar fashion, al-Khula'i indicates three other examples of "shrunken" augmented seconds. The maqamat Saba, Tarz Nawin, and Bastanikar are all indicated as having the notes F, Saba, A, and Bb. On page 31, al-Khula'i says that Saba is an alternative name for the note tik Hijaz, i.e., G-b-. These modes thus have the sequence F G-b- A Bb or 3 + 5 + 2. In the present day, however, Saba is commonly understood to refer to Gb rather than G-b- (see Muhammad 1984:11).

41. Earlier, when medieval theorists were conceptualizing the augmented second as being significantly smaller, musicians seemed to have used this smaller interval as their standard and to have talked in terms of "stretching" or "expanding" this interval. See the c.1300 theorist Qutb al-Din's comments to this effect (Wright 1978:137).

42. Carmi-Cohen found the E-b- of maqam Rast to be higher than that of maqam Bayyati in acoustical studies (1964:103-104). The existence of two distinct positions for the note E-b- supports a two-fold grouping of the maqamat proposed in Chapter XI on modulation.

43. Fahmi agrees that the E-b- of Rast and Huzam differ, then adds that "it is not possible to distinguish this difference except with a sensitive musical ear for they are the same in theory" (1965:96 n.1).

44. Mahfuz's comma figures include a number of inconsistencies which might best be attributed to typographical errors (see 1964:318ff.).

Some Turkish musicians also espouse the idea of two Sikah-s, saying that the note Sikah in maqam Rast is eight commas from the note Dukah, while the Sikah in maqam Ussak is seven commas from the same note (Signell 1977:40-41). Mahfuz differs from this Turkish approach by indicating the sixth and seventh commas rather than the seventh and eighth.

45. Since al-Sabbagh made the above remarks, Cairo has continued to be the main center for Arab music in the Middle East.

46. D'Erlanger seems to be the only writer to mention pitch variation as a function of melodic movement (although the focus of his comment is really on pitch variation of the same interval in different modes):

> ... it is rare to come across many musicians who tune [the] intervals to an absolute ratio, no matter what the melodic context where one finds it. These divergences ... are due sometimes to the well-known phenomenon of melodic attraction. The action of this phenomenon only manifests itself in the performance of the modes and depends of the melodic movement (1949:74).

47. `Ali Darwish's sixth extra note, a second BB, can be understood to mark the difference between BB and Cb. The remaining notes, the standard twelve half-flats and half-sharps divide the twelve four-comma intervals that occur in the scale, i.e., between the first and fourth commas and between the fifth and ninth commas of each whole step, and between the four comma intervals of the two half-steps. (These twelve notes are marked by the symbol "^" in the following diagram. The second BB (or Cb) is not shown.)

```
GG   ¦¦   AA   ¦¦   BB   C   ¦¦   D   ¦¦   E   F   ¦¦  G
   ^    ^    ^    ^   ^    ^    ^   ^    ^   ^   ^    ^
```

`Ali al-Darwish assigns unusual names for many of his notes, names not found in any of the other sources used for the present study. Noteworthy is his application of the "nim" and "tik" prefixes to some of the fundamental note names. For example, the note above Rast is called tik Rast (see `Ali Darwish's general scale in D'Erlanger 1949:29).

48. Mahmud Kamil, the Cairo _`ūd_ player and music teacher, has studied the Turkish and Syrian theories of intonation and created his own theories for the comma positions between D and E: he says the third comma is used for maqam Nahawand, the fourth for Kurd, the fifth for Hijaz, the sixth for Bayyati, and the seventh for Rast. He acknowledges, however, that his three-fold division for the note Eb is not widely followed in Egypt (personal communication 6/2/87).

49. The propensity for a high Ab in modes such as Huzam, Shuri, and Suznak may result, in part, from the fact that the Ab on the standard Dukah (D) _nāy_ tends to be very high. It is possible but rather difficult for the _nāy_ player to produce a "true" Ab on the Dukah _nāy_.

50. `Abdullah al-Kurdi, a Cairo-based professional _qānūn_ player and music teacher, refers to this special tuning as _dūzān sultānī_, i.e., a tuning in which a given mode "reigns."

51. A few _qānūn_ players request additional _`urab_ so that they can produce specific examples of "variant" intonations. `Abdullah al-Kurdi, for example, has extra _`urab_ to produce a lowered major third for maqam Jaharkah. The extra _`urab_ are placed on only a few courses, however. al-Kurdi explains, "It would be too costly to put this extra _`urbah_ on every string" (personal communication 6/8/87). Indeed, the price of a _qānūn_ increases substantially if there are five or six _`urab_ per course as opposed to just four.

52. These levers and the dial for fine tuning the half-flats are added to European- and Japanese-made instruments by Cairo technicians.

CHAPTER V: MELODIC INTERVALS

In the sources for the present study, the melodic intervals used in modern Arab music are not discussed as a separate issue until the mid-twentieth century. In early modern-period works, mention of melodic intervals is limited to presentations of the Arab fundamental "scale" (dīwān). Mashaqah (c.1840) and al-Khula'i (1904), for example, state that the fundamental scale contains three "large" intervals of four quarter-steps and four "small" intervals of three quarter-steps (see Chapter II above). It is not until the late-nineteenth and early-twentieth centuries that writers begin to include intervallic analyses of the various maqamat. Moustapha offers an early example when he reports on his acoustical studies of the intervals found in five modes (1887). His findings are expressed in terms of string lengths and fractions. Shalfun provides an early example of intervallic analysis in terms of quarter-steps: after presenting the notes used in the modes Rast and Suznak, for example, Shalfun describes the intervals existing between each pair of adjacent notes (1921:159-162 and 187-188). Similar presentations appear in al-Hifni (c.1946) and Salah al-Din (1950) and are common in subsequent works.

It is not until D'Erlanger's French-language work, published in 1949, that the melodic intervals used in modern Arab music are analyzed and discussed as a separate issue, i.e., apart from presentations of the individual maqamat (p.72-75). The first Arabic-language discussion of this same material appears in the 1964 publication of the 1961-63 Cairo music conference (al-Halqah al-Thaniyah). [1] Similar presentations have appeared in numerous works written over the last twenty-five years so that discussions of the melodic intervals used in Arab music are now a common feature of modern Arab music theory. Such discussions usually appear in the literature immediately prior to chapters on the tetrachords used in Arab music.

The application of intervallic analysis to theoretical presentations of the various maqamat was facilitated by a new development in Arab modal theory at the turn of the century: starting in the late-nineteenth century, theorists began to present the modes as series of notes arranged in scalar fashion. al-Khula`i, for example, defines maqam Rast as "Rast - Dukah - Sikah - Jaharkah - Nawa - Husayni - Awj - Kirdan ..." (i.e., C D E-b- F G A B-b c...), and maqam Bayyati as "Dukah - Sika - Jaharkah - Nawa - Husayni - `Ajam - Kirdan - Muhayyar ..." (i.e., D E-b- F G A Bb c d...) (1904:41 and 43). Prior to this development, modes were described by giving a specific melodic phrase for each mode (see examples from Mashaqah in Appendix 1). When the modes were conceived as unique melodies, then intervallic structure was not considered an important element for distinguishing one mode from another. When conceived as scales, intervallic structure became an essential feature for this purpose (see Surur 1986:118, for example, where this new understanding is explicitly stated). Thus, intervallic analysis became, in time, an integral part of definitions of the individual maqamat. [2]

Recognizing Six, Five, or Four Sizes of Intervals

In general discussions of the melodic intervals, three stances are taken concerning the number of intervals found in modern Arab music. Some state that there are six intervals; i.e., those of one, two, three, four, five, and six quarter-steps (al-Hilu 1972:81 and Mash'al, al-Tafsir n.d.:36). Others say that there are only five intervals, omitting that of one quarter-step (D'Erlanger 1949:73-75). Most, however, recognize only four intervals, those of two, three, four, and six quarter-steps and thus reject intervals of both one and five quarter-steps (al-Halqah al-Thaniyah 1964:11; Fahmi 1965:55; Hafiz 1971:184-185; al-Faruqi 1974:82b; al-Jabaqji 1976:49; Touma 1977:41; Izis Fatah Allah et al. 1979:20-22; Muhammad 1984:5-6).

Those who give only four or five intervals state that the one quarter-step interval is not used in modern Arab music. Hafiz, for example, writes, "It is wrong to say that Arab music is built on the basis of the quarter tone, for in reality, the interval of a quarter step is not found between two successive degrees in any Arab scale" (1971:184; similar statements are found in Salah al-Din 1950:84, Jabaqji 1976:49, and Touma 1977:35). Salah al-Din adds that "the smallest interval" in Arab music "is the half-step" (1960:3n).

Those who include the one quarter-step indicate that it occurs in the following maqamat: Sikah and Huzam where the one-quarter step is said to occur between E-b- and a special leading tone, D#; Rast where the same D# occurs on occasion as an accidental, as a lower neighboring tone to E-b- (see samai' Rast Tatyus); 'Iraq and related modes where the one quarter-step is said to occur between BB-b- and a special leading tone, AA#; and maqam Sazkar (C D# E-b- F G ...) where the interval D# to E-b- is a quarter-step. Those who do not accept one quarter-step intervals take care to present the "offending" intervals in the above modes as half-steps rather than quarter-steps: the leading tone in Sikah and Huzam, and the accidental in Rast is said to be D=/= rather than D# (D=/= to E-b- is a half-step); the leading tone in 'Iraq is said to be A=/= rather than AA# (for example, see Muhammad 1984:15). Occasionally, however, the rare maqam Sazkar is presented as containing a one-quarter interval (D# to E-b-) even by those who refuse to accept such an interval (D'Erlanger 1949:194 and Jabaqji 1976:61). [3]

Those who acknowledge the existence of a five-quarter-step interval in present-day Arab music point to its occurrence in maqam Musta'ar between the notes E-b- and F# (E-b- F# G A Bb...). Assuming that the leading tone in the modes Sikah and Huzam is D=/=, then a five-quarter-step interval also occurs between the notes C and D=/= in the sequence C D=/= E-b-. Those who do not accept five-quarter-step intervals must overlook the above examples, either by not mentioning them or by allowing them to stand as exceptions to their "four-interval" statements. Fahmi (1965:55 and 62), Touma (1977:40-41 and 43), Jabaqji (1976:49 and 76), and Muhammad (1984:51) take the latter approach, including the five-quarter interval in their presentations of maqam Musta'ar despite their not including this interval in their discussions of the melodic intervals used in Arab music.

While most agree that one-quarter-step and five-quarter-step intervals are either non-existent or exceedingly rare in the present day, a review of early modern-period literature shows that the latter interval was considered somewhat common in the nineteenth and early twentieth centuries. Augmented-seconds, for example, such as those found in Hijaz tetrachords, were often presented as containing five rather than six quarter-steps (1 2-b- 3 4 or 1 2b 3-b- 4 rather than 1 2b 3 4) (see Mashaqah c.1840, al-Khula'i 1904, and even Kamil 1975; this point is discussed above in Chapter IV.B within the section on "shrunken" augmented seconds). In the present day, however, the augmented second in Hijaz tetrachords is uniformly conceptualized as containing six quarter-steps. Although there is no documentation which records the process of change away from five-quarter-step intervals, it seems likely, taking into consideration the many levels of westernization that occurred in Arab music and Arab music theory in the twentieth century, that these intervals were reconceptualized as containing six quarter-steps in an attempt to imitate the intervals found in Western music (see Chapter IV.B above). [4]

The move away from one-quarter- and five-quarter-step intervals may also be tied to the desire for a new simplified music theory. The first among the sources for the present study to declare that Arab music uses only four intervals, i.e., the members of the 1961-63 Cairo conference, state that they are guided by an overall desire for simplification and consolidation, "simplification...on a proper scientific basis which preserves the character of Arab music" and "facilitates ...teaching" (al-Halqah al-Thaniyah 1964:11). [5]

Terms Used to Name Melodic Intervals in the Twentieth Century

Although systematic discussions of melodic intervals are not found in early modern-period literature, such discussions are not an invention of twentieth-century Arab theorists. On the contrary, medieval Arab theorists conducted extensive analyses of melodic intervals in their writings (see Wright

1978:40,77, and 133). It seems, however, that the topic had to be revived in the twentieth century for inclusion in modern music theory. The multifarious names used for the various melodic intervals in the recent literature attests to this revival (see list below). Wanting to name the different categories of intervals and yet having no prevailing terminology for such a discussion, theorists adopted a variety of terms culled from medieval Arab and modern Western theory. They also created a number of new terms for this purpose. *Buʿd ṭanīnī*, used to name the whole-step interval, is an example of a term adopted from medieval Arab theory (it is also used in modern Turkish theory; Signell 1977:22-23). The adjective "kamil" (literally "whole"), used in the terms *ṣawt kāmil*, *buʿd kāmil*, and *masāfah kāmilah*, seems to be a direct translation of the Western concept of "whole step." Similarly, "thāniyah" (literally, "second"), used in the terms *thāniyah kabīrah*, *thāniyah mutawaṣsiṭah*, and *thāniyah ṣaghīrah* seems to be a translation of the Western "second" (as in "major second" and "minor second"). *Thaniyah zā'idah* appears to be a direct translation of the West's "augmented second."

Other terms are newly created and of a descriptive nature: *buʿd sharqī* (i.e., "the Oriental interval") and *masāfah sharqiyyah kubrá* (i.e., "the large Oriental interval") describe the three-quarter- and five-quarter-step intervals from a bicultural perspective. *Buʿd ṣaghīr* (literally, "small interval"), used in early modern-period sources to refer to the three-quarter-step intervals in the fundamental scale (see Chapter II), is now used to refer to half-step intervals in conjunction with *bu‘d wasṭ* or *bu‘d mutawassiṭ* ("intermediate interval") for three-quarter-step intervals, *bu‘d kabir* for whole steps, and *bu‘d zā'id* ("excessive interval") or *bu‘d wāfir* ("abundant interval") for six-quarter-step intervals.

Terms Used to Name Melodic Intervals in the Twentieth Century

Terms for the 4/4-Step Interval:

al-bu‘d al-kabīr ("the large interval")(*al-Halqah* 1964:11; Hafiz 1971:185; Mash‘al, *al-Tafsir* n.d.:36; Muhammad 1984:5)

al-ṣawt al-kāmil ("the whole sound")(*al-Halqah* 1964:11; Hafiz 1971:184; Jabaqji 1976:49)

al-masāfah al-kāmilah ("the complete interval")(al-Hilu 1972:81)

bu‘d ṭanīnī ("resounding interval")(Fahmi 1965:55; Jabaqji 1976:49)

bu‘d al-thāniyah al-kabīrah ("the interval of the large second")(Jabaqji 1976:49)

masāfah ṣawtiyyah bālighah kāmilah ("the whole major musical interval")(Shalfun 1921:161)

Terms for the 3/4-Step Interval:

al-bu'd al-mutawassiṭ ("the intermediate interval") (*al-Halqah* 1964:11; Mash'al n.d.:36; Muhammad 1984:5)
bu'd wasṭ ("middle interval")(Mash'al, *al-Tafsir* n.d.:36)

al-thāniyah al-mutawassiṭah ("the intermediate second") (Jabaqji 1976:49)
bu'd sharqī ("Eastern interval")(Fahmi 1965:55; Muhammad 1984:5)
masāfah sharqiyyah mutawassiṭah ("intermediate Eastern interval")(Hafiz 1971:181)
thalāthat arbā' al-ṣawt (three-quarters of a tone")(Hafiz 1971:184; Jabaqji 1976:49)

masāfah ṣawtiyyah qāsirah ("minor musical interval") (Shalfun 1921:161)

Terms for the 2/4-Step Interval:

al-bu'd al-ṣaghīr ("the small interval")(*al-Halqah* 1964:11; Fahmi 1965:55; Hafiz 1971:185; Mash'al, *al-Tafsir* n.d.:36; Muhammad 1984:5)
niṣf al-ṣawt ("the half tone")(Hafiz 1971:184; Jabaqji 1976:49)
al-thāniyah al-ṣaghīrah ("the small second")(Jabaqji 1976:49)

Terms for the 6/4-Step Interval:

al-bu'd al-zā'id ("the excessive interval")(*al-Halqah* 1964:11; Hafiz 1971:185; Muhammad 1984:6)
bu'd zā'id niṣf ("interval excessive by a half")(Mash'al, *al-Tafsir* n.d.:36)
al-thāniyah al-zā'idah ("the excessive second") (*al-Halqah* 1964:11; Hafiz 1971:184; Jabaqji 1976:49)
ṣawt kāmil wa niṣf ("whole tone and a half")(*al-Halqah* 1964:11)
al-ṣawt wa al-niṣf ("the one and a half tone")(Hafiz 1971:184)
al-ṣawt wa niṣfuhi ("the tone and a half")(Jabaqji 1976:49)
al-masāfah al-kāmilah wa niṣf al-masāfah ("the one and a half interval")(al-Hilu 1972:81)

Terms for the 6/4-Step Interval (continued):

bu`d wāfir ("abundant interval")(Fahmi 1965:55; Muhammad 1984:6)

masāfah ṣawtiyyah bālighah wa niṣf (i.e., "the major musical interval and a half")(Shalfun 1921:188)

Terms for the 5/4-Step Interval:

bu`d zā'id rub` ("interval excessive by a quarter") (Mash`al, *al-Tafsir* n.d.:36)

masāfah sharqiyyah kubrá or *masāfah sharqiyyah akbar* ("large" or "largest Eastern/Oriental interval")(Hafiz 1971:181)

Terms for the 1/4-Step Interval:

bu`d rub` or *rub` bu`d* ("one quarter interval")(Mash`al, *al-Tafsir* n.d.:36)

Although discussions of melodic intervals are commonly carried out in terms of quarter steps, theorists of the "Syrian school" of intonational theories assign comma values and occasionally frequency ratios to the different intervals. al-Sabbagh, for example, defines whole-step intervals as containing nine commas, the interval from D to E-b- as containing seven commas, the interval from E-b- to F as six commas, half steps as four or five commas, and augmented seconds as twelve or thirteen commas (1950:41ff.).

D'Erlanger, undoubtably influenced by the Syrian practice, goes a step further and assigns Pythagorean and just intonation values. After discussing the fact that the size of the intervals might vary from musician to musician and from mode to mode, D'Erlanger writes:

> Despite these divergences, one can attribute the following ratios to the five melodic intervals used in Arab music [D'Erlanger does not recognize one-quarter-step intervals]:
>
> 1. The interval of 2/4 of a tone corresponds either to the semitone of the Pythagorean scale (limma : 256/243), or to the major semitone of the natural [just] scale (16/15).
> 2. The interval of 3/4 of a tone can be identified with the ratio 12/11 of the aliquotes.[6]
> 3. The interval of 4/4 of a tone corresponds either to the major or Pythagorean tone of the ratio 9/8, or to the minor tone of the 'natural' scale of the ratio 10/9.
> 4. The interval of 5/4 of a tone recalls the 'ton maxime' of the Aristoxeneans composed of 5 'diesis' and which the Pythagoreans arbitrarily identified with the ratio 8/7.
> 5. Lastly, the interval of 6/4 of a tone corresponds to the ratio of 6/5 of the aliquote scale. It is the natural minor third or augmented second of European music. (1949:74-75; al-Faruqi includes a similar discussion, 1974:82b)

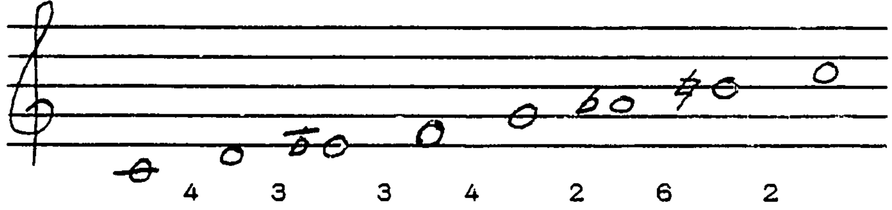
Methods for Presenting Intervallic Analyses

It is interesting to note changes in the methods theorists have used for indicating the melodic intervals found in the various maqamat. Shalfun first gives the notes used in a given maqam by listing their Arabic/Persian names and then describes the intervals in a prose passage (1921:159-162). Hafiz (in al-Musiqa 1935 (2):7) and al-Hilu ([1961] 1972) use vertical diagrams in which the Arabic/Persian note names and the intervals are indicated:

	etc.
Nawa	
	1
Jaharkah	
	3/4
Sikah	
	3/4
Dukah	
	1
Rast	

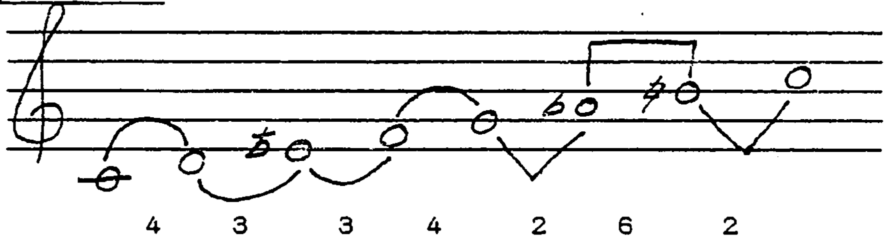
After Western notation was adopted, theorists began to present the maqamat as scales transcribed on the treble clef. Many add numbers between the notes in order to indicate the number of quarter steps contained in each interval (al-Hifni c.1946:130ff.; Salah al-Din 1950; Surur 1986; etc.). See, for example, the following presentation of maqam Suznak:

maqam Suznak:



Over the last forty years a new method for indicating the melodic intervals was adopted. Symbols are added to the staff transcriptions, each symbol representing a specific sized interval. Most commonly, a convex line connecting two notes indicates a whole step, a concave line indicates a three-quarter-step interval, a "v"-shaped symbol indicates a half step, and a three-sided symbol represents a six-quarter-step interval (see Salah al-Din 1950:101-102; Fatah Allah 1971; Fatah Allah et al. 1979:17 and 21; Shurah 1983:2-18; and Muhammad 1984:5-6; Mash'al [al-Tafsir n.d.:36] assigns the same symbols for different intervals). Following this method, the intervals in maqam Suznak are indicated as follows:

maqam Suznak:



The inclusion of such symbols, long used in Western musicological analysis, can be seen as a natural extension of the process of adopting aspects of Western notation. It reflects the desire among theorists and educators in the Middle East today to adopt from Western music all that they think will aid the simplification and development of Arab music theory and Arab music pedagogy.

In conclusion, theoretical discussions of the intervals used in modern Arab music date from the late-nineteenth century. As there was no immediate precedent for these discussions, theorists had to develop new methods and terminology in order to conduct their analyses. They also had to decide how many intervals to recognize. While some have recognized five or six intervals, it has been most common to admit only four, i.e., those of two, three, four, and six quarter-steps. This latter approach represents a new understanding of the intervals used in performance since five-quarter-step intervals were common in nineteenth- and early-twentieth-century descriptions of the maqamat.

NOTES FOR CHAPTER V

1. Melodic intervals were also discussed in the first round of this extended conference, held in 1957, and might appear in the 1959 publication that resulted from this first part of the conference. I was not able to gain access to this work.

2. Since melodic movement in Arab music is generally based on step-wise or contiguous motion, a study of the intervals found in modal scales is, for the most part, also a study of the intervals used in Arab music. Leaps beyond the next neighboring note generally occur only at the beginning of phrases or within sequences. In a few cases, however, melodic leaps are a specific feature of the mode being performed; this is discussed in Section K of Chapter X below.

3. Touma (1977:41ff.), Muhammad (1984:34ff.), Fahmi (1965:56ff.), and others simply ignore this rare mode. D'Erlanger includes two other examples of one-quarter-step intervals (1949:172 and 174). Jabaqji presents Sikah and Huzam as containing the interval D# to E-b- and `Iraq and Awj `Iraq as containing the interval A# to B-b- (1976:67, 76, 78, 80, and 83) even though he states that Arab music does not use the one-quarter-step interval.

4. Izis Fatah Allah et al. comment that it is "more correct" to present augmented seconds as "approximating" five quarter-steps but they then proceed to analyze these same intervals as containing six quarter-steps (1979:21n,37,94,99, and 101).
Mashaqah also includes a number of one-quarter-step intervals in his presentations of the various modes (see 1899:729 #3 and 7, 884 #7 and 8, 929 #11, 932 #3). Only one of these involves the D# to E-b- controversy which still exists today.

5. These are the same people who seek to replace the Arabic/Persian note names with Western solfege syllables (see Chapter III). Later we will see that they also want to limit the number of tetrachords and maqamat included in discussions of modern Arab music theory.

6. Aliquotes are those who favor fractions in which the numerator exceeds the denominator by one.

CHAPTER VI: TETRACHORDS

A. INTRODUCTION

According to middle-period and present-day theory, tetrachords are the building blocks with which the Arab maqamat are constructed. [1] al-Ḥifni, for example, writes that "the *ajnās* [i.e., tetrachords] are the basic components for creating the maqamat" (1938:161; c.1946:171). D'Erlanger adds, "If in Western music the melody has as an essential base the interval of the octave, the fundamental element, the primary cell of Arab melody is the fourth" (1949:68; see also p.67ff., Salah al-Din 1950:99; Farah 1974:78, Muhammad 1984:14, etc.).

Tetrachords are named after modes in which they appear as the initial (lower) tetrachord. Just as the modes each have a root position in the general scale, so the tetrachords are also associated with a root position (*darajah aṣliyyah*). They are not, however, confined to this one position; on the contrary, they commonly occur in a number of different places in the overall gamut.

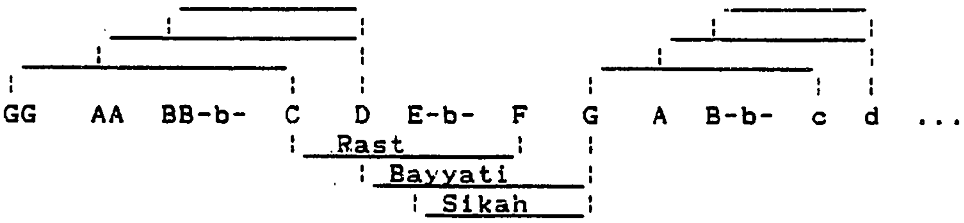
Today, it is commonly stated that there are either nine or eleven principal tetrachords. A number of other tetrachords occur only rarely, in little used maqamat. Taking these latter into consideration, modern theorists have identified from seventeen to nearly thirty distinct tetrachords.

1. The Nine Principal Tetrachords in Root Position:

a. organized by structural affinities:

		intervallic structure in terms of quarter-steps:
Rāst	C D E-b- F	4 3 3
Bayyātī	D E-b- F G	3 3 4
Sīkāh	E-b- F G	3 4
Ṣabā	D E-b- F Gb	3 3 2
'Ajam	BBb C D Eb	4 4 2
Nahāwand	C D Eb F	4 2 4
Kurd	D Eb F G	2 4 4
Nawā Athar [2]	C D Eb F# G	4 2 6 2
Ḥijāz	D Eb F# G	2 6 2

The first three tetrachords in the above table occur naturally in the fundamental scale from C, D, and E-b-, respectively. They also reoccur within this scale both a fourth below and a fifth above their root positions:



b. organized by root position: [3]

'Ajam	BBb C D Eb	4 4 2
Rāst	C D E-b- F	4 3 3
Nahāwand	C D Eb F	4 2 4
Nawā Athar	C D Eb F# G	4 2 6 2
Bayyātī	D E-b- F G	3 3 4
Ṣabā	D E-b- F Gb	3 3 2
Ḥijāz	D Eb F# G	2 6 2
Kurd	D Eb F G	2 4 4
Sīkāh	E-b- F G	3 4

When the principal tetrachords are conceived as being nine in number, then Sikah is presented as a trichord, Nawa Athar as a pentachord, and the others as tetrachords(4) (see tables above). When the principal tetrachords are conceived as being eleven in number, then Sikah is conceived as a tetrachord(4) and two new tetrachords(4), Huzam and 'Iraq, emerge as separate entities (see tables below). Although the Sikah, Huzam, and 'Iraq tetrachords(4) can be conceptualized as variants of the Sikah trichord, Sikah and 'Iraq occur naturally in two different parts of the fundamental scale, i.e., starting from E-b- and BB-b-, respectively. Huzam, in root position, is said to occur from E-b-.

2. The Eleven Principal Tetrachords:

a. one trichord becomes three tetrachords(4):

Sikah 3 4	<	/ Huzām	E-b-	F	G	Ab	3 4 2
		'Irāq	BB-b-	C	D	E-b-	3 4 3
		\ Sīkāh	E-b-	F	G	A	3 4 4

b. organized by structural affinities: [4]

'Irāq	BB-b-	C	D	E-b-				3 4 3
Rāst		C	D	E-b-	F			4 3 3
Bayyātī			D	E-b-	F	G		3 3 4
Sīkāh				E-b-	F	G	A	3 4 4
Huzām				E-b-	F	G	Ab	3 4 2
Ṣabā			D	E-b-	F	Gb		3 3 2
'Ajam	BBb	C	D	Eb				4 4 2
Nahāwand		C	D	Eb	F			4 2 4
Kurd			D	Eb	F	G		2 4 4
Nawā Athar		C	D	Eb	F#	G		4 2 6 2
Ḥijāz			D	Eb	F#	G		2 6 2

3. Tetrachords in the Literature

Tetrachords are mentioned in two different contexts within middle-period and present-day theoretical works. First, there are introductory discussions which commonly contain lists of the various tetrachords used in Arab music and explanations of the basic elements of tetrachordal theory (concepts such as conjunct, disjunct, tetrachord, pentachord, etc.). Second, tetrachords are featured in theoretical presentations of the individual maqamat: for each mode a scale is given, then the scale is analyzed for its constituent tetrachordal units. Maqam Bayyati, for example, is commonly analyzed in the present day as consisting of a Bayyati tetrachord on D and a Nahawand tetrachord on G.

maqam Bayyati:

```
 _______________
¦ Bayyati tetra ¦
¦     on D      ¦
D   E-b-   F    G    A Bb    c    d
                ¦  Nahawand  ¦
                ¦_tetra on G_¦
```

B. THE REVIVAL OF TETRACHORDAL THEORY

Tetrachords played a major role in medieval Arab theory [5], medieval theorists having learned about tetrachordal theory from writings of the ancient Greeks. The word jins (pl. ajnās), the most common term in both ancient and modern Arab theory for "tetrachord," stands as testimony to these Greek roots since it is an Arabicized form of the ancient Greek term, genus. [6]

As both modern and medieval Arab tetrachordal theory are couched in similar (but not identical) terms, it is generally assumed that there has been a continuous tradition of tetrachordal conceptualization and analysis. [7] This is not the case, however. The sources from the first part of the modern period do not mention tetrachords at all. During fieldwork conducted in Egypt from 1798-1801, Villoteau found no evidence of contemporary conceptualization in terms of tetrachords: he did not record the existence of even a single term for discussing the phenomenon of tetrachords (1826:113ff.). When Mashaqah presents an in-depth study of the contemporary theory and practice in c.1840, he too does not mention tetrachords. His descriptions of the various modes give little evidence of even a dormant form of tetrachordal conceptualization: rather than presenting the modes as scalar structures upon which tetrachordal analyses could easily be performed, Mashaqah gives specific melodic lines for each mode (see Appendix 4).

It was not until Ronzevalle that a writer from our sources mentions the phenomenon of tetrachords (1899:220-221 and 726-727), but this is only in footnotes which discuss Greek and medieval Arab theory. Ronzevalle does not apply the concept to the music of the modern period. al-Khula'i's Kitab al-Musiqa al-Sharqi, a major presentation of contemporary theory and practice published in 1904, again contains no mention of tetrachords.

Along with the negative evidence contained in the above sources (i.e., the lack of any reference to tetrachords in the early modern period), we have the testimony of three Western scholars on this matter. Rouanet wrote in 1922 that "the notion of the formation of genres ... has completely disappeared from modern Arab music" (p.2755). After studying Mashaqah's treatise and conducting fieldwork in Egypt from 1931 to 1933, Alfred Berner remarks that Arab music theory of the nineteenth and early twentieth centuries lacked tetrachordal theory (1937:9-10, etc.). Similarly, D'Erlanger, describing the period prior to 1932, wrote, "The idea of genre is ... latent in the spirit of the Arab musicians of our day although they have not attributed a special name to this fundamental element of their melodic art" (1949:70). This testimony is especially surprising when viewed from the present-day perspective for today there are over a dozen widely recognized terms for describing various aspects of tetrachordal theory (these terms are discussed below). The concept of tetrachords, then, had disappeared from Arab music theory prior to the beginning of the modern period. [8]

Among our sources, it is not until the 1932 Congress publications (Kitab Mu'tamar 1933 and Recueil 1934) that the concept of tetrachords is first applied to the music of the modern period. [9] In two different sections of the Congress publication (one prepared by D'Erlanger and `Ali Darwish, the other by the Institute of Oriental Music, Cairo and `Ali Darwish) the now standard tetrachordal analysis of the modes appears in the modern theoretical literature for the first time (Recueil 1934:188ff. and 529ff., respectively). [10] Later in the same decade, al-Hifni is the first writer among our sources to present a separate discussion of tetrachords as they occur in modern-day Arab music (1938:156-160). In this work, al-Hifni explains the concept of tetrachords, lists a number of the tetrachords used in the contemporary period, describes their intervallic structure, and defines "conjunct" and "disjunct" tetrachords.

The inclusion of tetrachordal analyses in the work of the 1932 Congress was the result of the expressed will of the members of the Congress' Organizing Committee. This nine member committee drew up a list of tasks for each of the "working" committees, and thus focused the activities of each committee on topics and issues that the organizers felt would be most worthwhile. The Committee on Modes, Rhythms and

Composition were given the following four tasks regarding modal analysis:

> 1. To make a list of the maqamat used in Egypt.
> 2. To classify these modes according to their tonic notes [Mashaqah and al-Khula'i had followed this approach in c.1840 and 1904, respectively].
> 3. To analyze them by breaking them down into "genres" (melodic series of a fourth, fifth, or third defined by the prominent notes of the maqam) ...
> 4. To determine those [modes] in the other countries of Arab Music which correspond to [the Egyptian modes], without neglecting to mention if they differ by
>   a. the break down into genres;
>   b. the way of treating the mode;
>   c. the name.
>
> (Recueil 1934:82)

The members of the Committee on the Modes, Rhythms, and Composition were apparently aware of the historic development in which they were taking part, for the committee's general report notes, "... this is the first time that the Arab modes ... have been analyzed and broken down into genres. This work will have a fundamental importance for later studies which will have an aim of establishing a scientific theory of Arab music on a solid base" (Recueil 1934:136).

Two developments which occurred prior to the 1932 Congress helped pave the way for the revival of tetrachordal theory within the modern music theory. First, there was a renewed interest in medieval Arab music theory, a body of literature in which the concept of tetrachords played a major role. This served to raise the issue of tetrachords, even if the interest was initially only of a historical nature (see, for example, Ronzevalle's comments on the tetrachordal theories of al-Farabi, d.950, and Safi al-Din, d.1293; 1899:220-222 and 726-727). Significantly, D'Erlanger and al-Hifni, both members of the 1932 Congress Organizing Committee, each conducted extensive studies of medieval treatises. Indeed, it seems appropriate to attribute the tetrachord-related questions posed by the 1932 Congress's Organizing Committee to D'Erlanger's and al-Hifni's knowledge of medieval Arab theory. [11]

A second and no less significant development was that theorists started conceiving of the modern-day modes as series of notes arranged in scalar fashion instead of as melodic formulas as was the case in Mashaqah's work. This was an important step for facilitating the eventual application of tetrachordal analyses (see Mustapha 1887, Dhakir 1902, and al-Khula`i 1904 for early examples of modes presented as scales). It was in the theoretical and intellectual milieu created by these two developments that the Organizing Committee of the 1932 Congress ordered the tetrachordal analysis of the modes and thus began in earnest the revival of tetrachordal theory in the modern period.

C. TETRACHORDS IN MODERN ARAB THEORY

Since its revival in the first part of the twentieth century, Arab tetrachordal theory has developed in a number of directions. Five broad issues emerge in the recent theoretical literature: 1) the overall size of the various tetrachords, giving rise to terms for tetrachord(4), pentachord, trichord, etc.; 2) the intervallic structures of the various tetrachords, giving rise to separate names for each particular structure and also to different schemes for classifying the tetrachords based on their intervallic structures; 3) the placement of the various tetrachords within the overall gamut, leading, in some instances, to different names for the same tetrachord when it appears in different positions, and also leading to a classification of the tetrachords based on tonic pitch; 4) the number of tetrachords used in modern Arab music; and 5) the joining together of two or more tetrachords to form larger modal scales, giving rise to separate terms for the first and second tetrachords in a given scale and also to terms for the different types of "tetrachord joining," i.e., "conjunct", "disjunct", and "overlapping". In order to address these issues, numerous terms were either newly coined or recently adopted from medieval Arab or modern Western theory so that there are now over a dozen terms describing various aspects of tetrachordal theory which occur with some regularity in the most recent literature. These five issues and the terms used for each will be discussed in turn.

1. The Overall Size of the Various Tetrachords; Terms for Tetrachord, Trichord, Tetrachord(4), and Pentachord

a. Two Terms for Tetrachord:

In modern Arab terminology, there are two terms for the concept of tetrachord in its most general sense, i.e., encompassing trichords, tetrachords(4) (see note 1), and pentachords. The most common is *jins* (pl. *ajnās*), a term which was used in medieval Arab theory but which, having disappeared from use before the beginning of the modern period, had to be revived in the twentieth century.

Prior to the revival of the word *jins*, however, another term was coined for referring to tetrachords:

> In order to describe the scales ... the professor Iskandar Shalfun analysed them in small groups of homogeneous notes, that is to say, in genres, and in order to indicate these small melodic series, he employed, for the first time in Arabic music literature, the term "ʿiqd" (pl. ʿuqūd), which signifies "necklace" - thus comparing the notes of a tetrachord to assorted pearls tied together by that imaginery thread which is melodic consonance. (D'Erlanger 1949:71) [12]

In our sources, the terms *ʿiqd* and *jins* first appear in two reports within the 1932 Congress publications. [13] In his report, D'Erlanger uses *ʿiqd* most prominently but also uses *jins* (*Kitab Mu'tamar* 1933:182ff.; *Recueil* 1934:188ff.). The report of the Institute of Oriental Music (Cairo) uses jins exclusively (Recueil 1934:529ff.).

The idea that the term jins was in the process of being revived is supported by an explanatory footnote included at the beginning of the Institute's report. Rather than stating a contemporary understanding of the term, the writers cite the definition used by Safi al-Din in the 13th century:

> The word "genre" (jins) in principle denotes the interval of a fourth ... but by extension this word was applied by some Arab musicologists, including the author of the Sharafiyyah [i.e., Safi al-Din]) to designate other intervals. This [latter] usage has been applied in the [following] analysis of the maqamat. (Recueil 1934:529)

A similar introduction to the term, i.e., one based on historical rather than contemporary usage, is found in al-Hifni (1946:166; al-Hifni's presentation is repeated with slight editing in al-Hilu 1972:80).

b. Separate Terms for Tetrachord(4), Pentachord, and Trichord

Since the mid 1940s, the terms jins and 'iqd have both appeared regularly in Arabic music literature carrying the general meaning of "tetrachord" (for the use of 'iqd with this meaning, see D'Erlanger in Recueil 1934:188ff., al-Hilu 1972:92 and 94ff., and Jabaqji 1983:11). Jins has, however, become more common in this role by reason of the fact that 'iqd evolved to carry a more specific meaning, that of "pentachord." Among the sources for the present work, 'iqd first appears as "pentachord" in works by al-Hifni (c.1946:192) and al-Shawwa (1946:18) (see also Salah al-Din 1950:100 and al-Sabbagh 1950:37). It is still used in this sense in the present day at the main music institutes in Cairo. When ʿiqd is used to mean pentachord, then jins is used as the term for "tetrachord(4)", thus providing separate terms for tetrachord(4) and pentachord.

The use of these two terms to mean "tetrachord(4)" and "pentachord" is not, however, universal. al-Hilu, for example, follows a pattern he found in D'Erlanger (1933): when discussing individual tetrachords he uses jins, but when analyzing the various tetrachords which make up a given mode then "the ajnās ... are called ʿuqūd. It is said, for example, the first ʿiqd, the second ʿiqd, etc." (1972:92). Mahfuz (1964) reverses the definition of the two terms, using ʿiqd for "tetrachord(4)" and jins for pentachord. Jabaqji (1983:11) uses ʿiqd in the general sense of "tetrachord."

In theory books, when jins or ʿiqd are used in the general sense of "tetrachord," then one of three phrases is commonly added when the author wants to specify a tetrachord of a specific size: "dhū al-thalāth" ("possessing three [notes]"), "dhū al-arbaʿ" ("possessing four [notes]"), and "dhū al-khamas" ("possessing five [notes]"). "Jins Rāst dhū al-arbaʿ," for example, refers to the sequence C D E-b- F, while "jins Rāst dhū al-khamas" refers to C D E-b- F G. These additional phrases, used in medieval Arab theory, were revived within modern theory at the same time as the word jins. Both appear in the 1932 Congress publication, within the report of the Institute of Oriental Music (Recueil 1934:529ff.).

Since the coining of the word `iqd and the revival of the word jins, there has been some reluctance to use either to mean "trichord." "Jins __x__ dhū al-thalāth" and "`iqd __x__ dhū al-thalāth" have appeared in a few sources but so has "__x__ dhu al-thalāth", i.e., refusing to use either jins or `iqd to name the phenomenon (see, for example, Recueil 1934:536ff. and Fahmi 1965:60ff.). This issue was finally addressed in a direct manner when a separate term was coined for "trichord", i.e., nisbah (literally, "relation" or "relationship"). Among our sources, this term first appears in a work by Shurah (1983:17-18). He uses it to refer to the Sikah trichord, whether in root position (E-b- F G), or in any of its various transpositions (A-b- Bb c, for example). Muhammad also uses the term nisbah, both in her 1984 work (p.15, etc.) and in her classes at the Kulliyat al-Tarbiyyah in Cairo (personal communication, 6/87).

A number of Cairo-based theorists have adopted a variation on the concept of trichord by adding to these three-note structures the obligatory use of an additional note, i.e., a leading tone. Muhammad explains (1984:15), "By reason of the fact that [the Sikah trichord] contains [only] three tones, it touches the leading tone (al-ḥassās) and returns to the tonic in this manner [then in staff notation]:

D=/= <---> E-b- F G."

Such structures have been named tajnīsāt (s. tajnīs). The term first appears in our sources in a dissertation by Izis Fatah Allah (1971). In this work Fatah Allah defines tajnīs in slightly different terms: it is "a structure which deviates from the jins by changing the fundamental note to one of its middle notes" (see also Fatah Allah et al. 1979:91n.). Some, however, use tajnīs to mean simply "trichord." In such cases it functions as a synonym for nisbah (see Muhammad 1984:20a-b). [14]

While nisbah and tajnīs are generally understood in present-day Cairo academic circles, it remains to be seen whether these terms will be widely adopted and retained as essential elements of Arab music theory. Whatever the eventual outcome, the addition of these terms fits the general trend over the last fifty years towards greater specialization of tetrachordal terminology.

c. Terms Specifying the Exact Size of Tetrachords(4)

As modern tetrachordal theory developed in the first half of the twentieth century, theorists focused on the exact size of the different tetrachords(4) used in Arab music. A majority of these tetrachords encompass the interval of a perfect fourth (ten quarter-steps). For example,

\`Iraq	(BB-b- C D E-b-)	3 4 3	= 10
Rast	(C D E-b- F)	4 3 3	= 10
Bayyati	(D E-b- F G)	3 3 4	= 10
Hijaz	(D Eb F# G)	2 6 2	= 10
\`Ajam	(BBb C D Eb)	4 4 2	= 10
Nahawand	(C D Eb F)	4 2 4	= 10
Kurd	(D Eb F G)	2 4 4	= 10

These tetrachords(4) came to be referred to as *ajnās tāmmah*, i.e., "perfect tetrachords" (s. *jins tāmm*), probably an adaptation of the Western concept of perfect fourth (see al-Hifni c.1946:166; Salah al-Din 1950:101; Hafiz 1971:181; Mash'al n.d.:99; Muhammad 1984:14). [15]

A number of commonly used tetrachords(4) encompass an interval either smaller or larger than a perfect fourth. Such tetrachords came to be referred to as *ajnās nāqisah* (s. *jins nāqis*), i.e., "diminished tetrachords," and *ajnas zā'idah* (s. *jins zā'id*), i.e. "augmented tetrachords." These terms, along with *jins tāmm* first appear in our sources in al-Hifni's *al-Musiqa al-Nazariyyah* (c.1946:166 and 182; they are not found in the 1938 edition of this work).

ajnās nāqisah

Saba	(D E-b- F Gb)	3 3 2 =	8
Huzam	(E-b- F G Ab)	3 4 2 =	9

ajnās zā'idah

Sikah	(E-b- F G A)	3 4 4 =	11
Nawa Athar	(C D Eb F#)	4 2 6 =	12

In his *Miftah al-Alhan al-'Arabiyyah* (1950:101-102), Salah al-Din expanded the terminology to include terms for each specific size of tetrachord(4), measured in quarter-step increments. He reserved *jins nāqis* for the Saba tetrachord of 8 quarter-steps; uses *jins mutawassiṭ* ("intermediary tetrachord") for the Huzam tetrachord of 9 quarter-steps; retains *jins tāmm* for describing the tetrachords of 10 quarter-steps; adds first *jins atamm* ("more perfect tetrachord") and later *jins fūq al-tāmm* ("'above perfect' tetrachord"; 1960:61) for the Sikah tetrachord of 11 quarter-steps; and reserves *jins zā'id* for the Nawa Athar tetrachord of 12 quarter-steps. Hafiz includes the same terms with the exception of using *jins zā'id nawa`an* ("a somewhat augmented tetrachord") for the Sikah tetrachord (1971:181). Mash`al (*al-Tafsir* n.d.:100) also assigns specific terms to the different sizes of tetrachords(4) but his terms differ from those of Salah al-Din and Hafiz:

jins	# of 1/4 steps	Salah al-Din and Hafiz	Mash`al
Saba (D E-b- F Gb)	(8)	jins nāqis	jins taḥt al-nāqis ("below diminished")
Huzam (E-b- F G Ab)	(9)	jins mutawassiṭ	jins nāqis
Rast, etc.	(10)	jins tāmm	jins tāmm
Sikah (E-b- F G A)	(11)	jins atamm jins fūq al-tāmm jins zā'id naw`ān	jins zā'id
Nawa Athar (C D Eb F#)	(12)	jins zā'id	jins fūq zā'id ("beyond augmented")

This expanded terminology has not been widely incorporated in the most recent theoretical literature. One reason for this is that those who present Nawa Athar as a pentachord and Sikah as a trichord (and thus recognize only nine principal tetrachords) have need only for the term *jins nāqis* to describe the Saba tetrachord: the remaining six tetrachords all encompass a perfect fourth. Nevertheless, the efforts of the above theorists represent a natural step in the continued development, the increasing sophistication of modern Arab tetrachordal theory.

d. Trichord, Tetrachord(4) or Pentachord: An Element of Choice

There is often an element of choice in the naming of a given tetrachord as either a trichord, tetrachord(4), or pentachord. Maqam Sikah, for example (E-b- F G A B-b- c d e-b-), can be conceptualized as beginning with a trichord (E-b- F G), a tetrachord(4) (E-b- F G A), or a pentachord (E-b- F G A B-b-). Similarly, maqam Rast is analyzed by some as beginning with a tetrachord(4) (C D E-b- F), by others as beginning with a pentachord (C D E-b- F G). Some theorists have taken definite stances on this subject in a few cases. The conference of musicians and musicologists held in Cairo in 1959, for example, recommended that trichords and imperfect tetrachords(4) (those not containing ten quarter-steps) should all be conceptualized as pentachords (al-Halqah al-Thaniyah 1964:17). Others allow imperfect tetrachords(4) (Saba, Sikah, Huzam, etc.) but do not recognize trichords (al-Hifni c.1946, see p.167-168; al-Shawwa 1946:18 and 33ff.; Salah al-Din 1950:207; al-Halqah al-Thaniyah 1964:13; al-Hilu 1972:80ff.; Mash'al, al-Tafsir n.d.:99). Despite this history of lack of support for trichords, these three-note structures are commonly recognized in the present day in theory books and at Cairo music institutes. As for the Nawa Athar/Nakriz tetrachord, it is commonly held that this structure should be considered as a pentachord rather than as a tetrachord(4) (Congress 1934:531,536,etc.; al-Hifni c.1946:192; D'Erlanger 1949:89; Mahfuz 1964:282,285,309, and 355; Fahmi 1965:77; al-Mahdi 1972:36; Shurah 1983:6; Muhammad 1984:6). Muhammad offers a present-day explanation for this stance: "The reason behind [Nawa Athar's] including five notes [C D Eb F# G] is that the [F#] inevitably acts as a leading tone to the note [G]" (1984:16).

2. Naming and Classifying the Tetrachords According to Their Intervallic Structure:

a. Tetrachord Names

Tetrachords are each given independent names in order to designate their unique intervallic structures. D'Erlanger comments that modern-period names lack an analytic quality:

> If in the didactic terminology of the ancient Arab theorists we come across specific names which suffice by themselves to indicate the formula of the division of the tetrachord and the order of the arrangement of its intervals - such as "dhil maddataya" which signifies a tetrachord of two notes, and "munfasil" for the tetrachord in which two large intervals are separated by a smaller one - the vocabulary of the Arab musicians of our days is far from being so analytical. We find only some place names such a "Hijaz", "Nahawand", and "Najdi" which attribute the melodic succession which they designate to a definite country [16]; or else terms such as "Sikah" or "Jaharkah" [my spelling] (i.e., the 3rd or 4th degree) which indicate the place in the specific scale of the degree on which the melodic series that these terms designate generally rest. Other names have but a poetic sense such as "Nawa Athar" which signifies "a new sensation" in Persian. (1949:71)

Rather than indicating the specific intervallic structure contained within, tetrachords in the modern period are named after the most prominent mode in which the particular structure appears as the initial (lowest) tetrachord. For example, the sequence C D E-b- F is called a Rast tetrachord after maqam Rast (C D E-b F G A B-b- c); similarly, the sequence D Eb F# G is called a Hijaz tetrachord after maqam Hijaz (D Eb F# G A Bb c d).

Caution must be used when associating a tetrachord or mode with a specific region solely on the basis of the names used in modern-day theory, for over the centuries the same name has often referred to different intervallic structures. Busalik, for example, was the name of a tetrachord with the intervals (1 2b 3b 4) in the works of Safi al-Din (1252 and

1267 A.D.) and Qutb al-Din (1300 A.D.), but by the time of al-Ladhiqi (c.1500) Busalik referred to the sequence (1 2 3b 4 5) (Wright 1978:164). Wright also mentions that "Nahawand" used to refer to a number of "unrelated" scales in the 13th to 15th centuries (ibid.:69 and 71). [17]

b. Tetrachord Classifications Based on Intervallic Structure

When theorists list the tetrachords used in modern-day Arab music they often organize their presentations according to intervallic features. Salah al-Din offers an early example of this when he writes that "the ajnās in Arab music are of two kinds," i.e., "those free of [three-]quarter tones," and "those which include [three-]quarter tones" (1950:99-100). He then includes two tables placing the tetrachords into one of these two groups. This approach was adopted by the 1961-63 Cairo conference (al-Halqah al-Thaniyah 1964:13) and by Hafiz (1971:182).

the Halqah's tetrachords:

those free of three-quarter tones:		the intervals:
'Ajam	(BBb C D Eb)	4 4 2
Nahawand	(C D Eb F)	4 2 4
Nawa Athar	(C D Eb F#)	4 2 6
Kurd	(D Eb F G)	2 4 4
Hijaz	(D Eb F# G)	2 6 2

those containing three-quarter tones:		the intervals:
Rast	(C D E-b- F)	4 3 3
Bayyati	(D E-b- F G)	3 3 4
Saba	(D E-b- F Gb)	3 3 2
Sikah tāmm ('Iraq)	(BB-b- C D E-b-)	3 4 3
Sikah fūq al-tāmm (Sikah)	(E-b- F G A)	3 4 4
Sikah mutawassiṭ (Huzam)	(E-b- F G Ab)	3 4 2

The *Halqah*'s terms for the three Sikah tetrachords(4) are *tāmm*, i.e., the "perfect" fourth; *fūq al-tāmm*, i.e., "above perfect"; and *mutawassiṭ*, i.e., "intermediary."

al-Hifnī, the first writer from among our sources to list the tetrachords used in modern-day Arab music (1938:157-158), does not comment on the structure behind his presentation; however, one is discernable. First he lists the tetrachords which fit the Western diatonic scale, starting with the equivalents of the Western major and minor, `Ajam (BBb C D Eb) and Nahawand (C D Eb F), and then adding Kurd (D Eb F G). Next he gives three tetrachords which are based on the Arab fundamental scale with its E-b- and B-b-, i.e., Rast (C D E-b- F), Bayyati (D E-b- F G), and `Iraq (BB-b- C D E-b-). Then he gives the Hijaz tetrachord with its augmented second (D Eb F# G), and last, he gives Saba which is an imperfect tetrachord.

D'Erlanger (d.1932) uses this same organization in his French-language presentation of the tetrachords (1949), but he does so explicitly and in a comprehensive fashion. He calls the first group of tetrachords "the diatonic genres obtained from the degrees of the natural [Western] scale" (1949:77). The second group are called "the diatonic genres obtained from the degrees of the Arab [fundamental] scale" (ibid.:81). Next he gives the tetrachords which contain an augmented second, calling these "the chromatic genres" after the ancient Greek use of the term "chromatic" (ibid.:86ff.).

And lastly, he adds those tetrachords which do not fit into the other three categories (such as Saba), calling them "the special genres" after al-ajnās al-mufradah, i.e., "the singular/solitary tetrachords", a term used by Safi al-Din (d.1294) and others to describe such tetrachords (ibid.:93). D'Erlanger comments that these names for the different categories, derived from ancient Greek and medieval Arab theory, were not known to the Arab musicians of his day. From al-Hifni's presentation, however, we see that the general principles behind these categories were known to modern Arab theorists.

> [The terms "diatonic" and "chromatic" which have been] borrowed from the musical theory of the ancient Greeks do not have equivalents in the vocabulary of the Arab musicians of our days. Although practicing an art in more than one aspect identical to that of the Oriental Greeks, the Arab musicians have always, in effect, refused to adopt their terminology, despite the effort of many generations of Hellenistic [Arab] theorists. The numerous treatises written by Arab theorists between the 9th and 16th centuries (of which one still finds numerous examples in various Arab countries) have not, in effect, left any trace in the technical vocabulary of the musicians of our days. (D'Erlanger 1949:76)

It should be remembered that D'Erlanger was commenting on the era prior to the revival of tetrachordal analysis, when even the term jins was not in circulation. [18]

3. The Placement of the Various Tetrachords within the Overall Gamut

Attention to the placement of the various tetrachords within the overall gamut has resulted in classifications based on tonic pitch and alternate names for some structures when they appear in different positions. al-Hilu, for example (1961:82), lists the tetrachords starting with the 'Ajam tetrachord based on BBb, then gives the C-based tetrachords (Rast, Nahawand, and Nawa Athar), the D tetrachords (Bayyati, Hijaz, Saba, and Kurd), and then those based on E-b-. al-Hilu breaks this ascending order once by inserting 'Iraq, a BB-b- tetrachord, in with the E-b- tetrachords (Sikah and Huzam). This is undoubtably done because of structural affinities among the three tetrachords; thus we see a mixing of the two approaches to classification.

Reviewing the tetrachordal analyses of the modes (common in the literature beginning with the 1932 Congress publications), we learn two points concerning tetrachord placement. First, we learn the positions to which the various tetrachords are commonly transposed in modern practice, and second, we find that, on occasion, the same tetrachordal structures are given different names depending on where they occur in the general scale. For example, although the Rast tetrachord keeps the same name whether it occurs on GG, C, D, F, or G, the Nahawand tetrachord is commonly called "Nahawand" when it occurs on C or F but is often called "Busalik" when it occurs on D or G. Similarly, the 'Ajam tetrachord (BBb C D Eb) is often called Jaharkah when based on F (F G A Bb); and the Sikah trichord (E-b- F G) is occasionally called 'Iraq when based on BB-b- (BB-b- C D) or Awj when based on B-b- (B-b- c d). These alternate names are all derived from the names of modes which use these structures as their initial tetrachords. (Other examples are given in the list of tetrachords below; al-Hilu gives an alternate name for most of the tetrachords he discusses; 1972:82.)

Those who favor a simplication of modern Arab music theory have spoken against this phenomenon saying that intervallic structure should be the only basis for naming the tetrachords (see al-Halqah al-Thaniyah 1964:14; Muhammad 1984:20a-b; and others).

a. Alternate Names and Leading Tones:

In his tetrachordal analyses of the various maqamat, 'A.H. Nuwayrah makes a distinction between the tetrachords Busalik and 'Ushaq based on their leading tones: the former, he says, has a half-step leading tone while the latter has a whole-step leading tone (personal communication 12/82). This idea is based on the leading tones that occur in the modes of the same names, Busalik having the notes (C# / D E F G A Bb c# d) and 'Ushaq having the notes (C / D E F G A Bb c d). Thus, Nuwayrah analyzes maqam Hijaz (D Eb F# G A Bb c d) as having a Busalik tetrachord on G, but Bayyati (D E-b- F G A

Bb c d) as having an 'Ushaq tetrachord on G.

Reviewing the instances of alternate names attributed to the same tetrachordal structures, we find that most of these names could be used to indicate the size of the leading tone in the same fashion that Nuwayrah has used the names Busalik and 'Ushaq. For example, the 'Ajam tetrachord could indicate a half-step leading tone (after the leading tone found in indicate a whole-step leading tone (maqam Hijaz: C / D Eb F# G A, Bb or B-b-, c d) while Hijaz Kar could indicate a half-step leading tone (maqam Hijaz Kar: B / C Db E F G Ab B c). The idea of incorporating leading tones into tetrachordal analyses has not, however, been raised by any of the other sources for the present day. Nuwayrah himself does not apply the idea to any other tetrachords besides Busalik and 'Ushaq. Nuwayrah's one use of this leading-tone distinction stands as an example of the ever-present potential within modern Arab music for idiosyncratic approaches to various practical and theoretical issues.

4. How Many Tetrachords are There? Recognizing the Standard Nine or Eleven

al-Hifni, the first writer from among our sources to list the tetrachords used in modern-day Arab music (1938:157-158), presents eight tetrachords "by way of example." Three authors take the opposite approach by attempting comprehensive lists: Salah al-Din introduces fourteen tetrachords but then includes a fifteenth in his analysis of the maqamat (1950:101-102 and 117). D'Erlanger lists seventeen tetrachords but admits that at least four of these are either rarely used or not recognized by modern-day Arab musicians (see comments within the list of rare tetrachords below). Mash'al gives sixteen intervallically distinct tetrachords (in al-Tafsir, n.d.:100). When these lists are compared, we find twenty-three discrete entities.

In the publication of the 1961-63 Cairo conference of musicians and musicologists (al-Halqah al-Thaniyah 1964), we find a third approach to listing tetrachords. Here the goal was not a comprehensive list; rather, those present sought a simplification of the rules of theory and practice in order to facilitate the teaching and continued development of Arab music (p.7). The halqah decided to recognize only nine tetrachords, apparently on the assumption that these tetrachords fully account for the tetrachords used in common practice. At the same time the conference members acknowledged that the nine tetrachords can be conceived as being eleven in number since the Sikah tetrachord has three varieties (p.13-14). In subsequent literature and in Cairo music institutes these became the two "standard" approaches to the issue of the number of tetachords in modern-day Arab music, i.e., the "standard nine" and the "standard eleven" (these two approaches are introduced in the first pages of this chapter; Fahmi 1965:77 and Muhammad 1984:14-16 list the standard nine; al-Halqah al-Thaniyah 1964:13, al-Hilu 1961:82 and Surur 1986:84-85 list the standard eleven [19]).

Besides the twenty-three tetrachords included in these lists, there are a few instances of theorists recognizing additional structures which differ from others only in terms of exact intonation. Mahfuz, for example, defines the Rast tetrachord as having the intervals, in commas, (9 + 7 + 6). In a few instances, however, he recognizes a tetrachord with the intervals (9 + 6 + 7), i.e., where the neutral third is lowered one comma. He calls this tetrachord "Rast Jadid" (1963:267,277,282 and 1964:327,337). Similarly, `Abdullah al-Kurdi distinguishes between the `Ajam tetrachord which he defines as having the intervals, in quarter-steps, (4 + 4 + 2), and a Jaharkah tetrachord in which the third and fourth degrees are slightly lowered (nāqis kūmā) (personal communication, 6/8/87). (Most theorists use the names `Ajam and Jaharkah interchangeably.) Other examples of such distinctions are indicated by the pairs of names, Hijaz and Hijaz Gharib, Busalik and `Ushaq, and Bayyati and Zawil (see below). When these additional tetrachords are included, then the number of tetrachords mentioned by the sources for the present study increases to near thirty. This is not to say that a list of all these tetrachords would be a definitive list of tetrachords recognized by present-day musicians and theorists for extensive interviews would undoubtably reveal other instances of idiosyncratic distinctions based on exact intonation.

A List of the Tetrachords Mentioned in the Sources for the Present Study as Used in Modern-Day Arab Music:

The following is a list of the twenty-three tetrachords mentioned by the sources for the present study. Additional tetrachords which result from fine distinctions of intonation are noted in the comments offered for each tetrachord. Any alternate names that appear in the literature are indicated.

The list begins with the standard nine/eleven and then includes those tetrachords which are commonly acknowledged as "rare." The "rare" tetrachords are divided into two groups, i.e., those which are mentioned by present-day theorists in Cairo, and those which appear in one or two written sources but are not recognized by present-day Cairo theorists. Note that the last six tetrachords given below are cited by only one or two people; the last five are not mentioned by present-day Cairo theorists. If one seeks a list of the tetrachords "now in use," the standard nine or eleven would suffice for most purposes. If one wanted to add a few rare tetrachords I would not include those beyond the first seventeen or eighteen in the following list. [20]

THE "STANDARD NINE/ELEVEN" TETRACHORDS

1. Rāst (C D E-b- F) (4 3 3)

This tetrachord commonly occurs on GG, G, C, and c. It also occurs on F, D, and d.

On one occasion al-Hilu calls Rast on GG by the name Yakah (1972:82). Rast on D is occasionally called Nishaburk (Recueil 1934:536; al-Hilu 1972:124).

Mahfuz includes a variety of Rast tetrachord called Rast Jadid; it differs from the standard Rast tetrachord by having a slightly lowered neutral third (1964:267,277,282,327,337). In terms of commas, Mahfuz gives Rast's intervals as 9 + 7 + 6, Rast Jadid's as 9 + 6 + 7.

2. Bayyātī (D E-b- F G) (3 3 4)

This tetrachord commonly occurs on GG, AA, D, G, A, and d. When on A it is occasionally called Husayni.

Mahfuz includes a tetrachord called Zawil which is similar to the Bayyati tetrachord but has a slightly raised neutral second (1964,359). In terms of commas, Mahfuz gives Bayyati's intervals as 7 + 6 + 9, Zawil's as 8 + 5 + 9.

3. Sīkāh (E-b- F G) (3 4)

This tetrachord commonly occurs on BB-b-, B-b-, E-b-, and e-b-, but also appears on F=/=, AA-b-, and A-b-. When on BB-b-, it is occasionally called 'Iraq. When on B-b- it is occasionally called Awj.

When Sikah is conceived as a trichord, then the "standard" number of tetrachords is given as nine. When Sikah is presented as a tetrachord (3 4 4), then Huzam (3 4 2) and 'Iraq (3 4 3) emerge as separate entities, resulting in the "standard" number of tetrachords increasing to eleven. The 'Iraq tetrachord, based on the note BB-b-, is often called Awj when it occurs on B-b-.

In one instance, al-Hilu calls the tetrachord (BB-b- C D E) by the name Mayah (1972:110). The Huzam tetrachord transposed to BB-b- (BB-b- C D Eb) is occasionally called Rahat al-Arwah after a mode of the same name (al-Hilu 1972:82; Mash'al n.d.:106). For the same reason al-Hilu calls the Sikah tetrachord on BB-b- by the name Farahnak (ibid.).

4. 'Ajam (BB C D Eb) (4 4 2)

This tetrachord, occasionally called 'Ajam 'Ushayran, commonly occurs on BBb, F, and Bb, but also appears on C and G, and rarely on D. This tetrachord is frequently called Jaharkah after the F-based mode of the same name (F G A Bb ...). 'Abdullah al-Kurdi and others in present-day Cairo, however, distinguish between 'Ajam and Jaharkah, saying that the third and fourth degrees in Jaharkah tetrachords are slightly lower (naqis cuma) than those in the 'Ajam tetrachord (personal communication 6/8/87). al-Mahdi stands alone when he names the 'Ajam pentachord on C (C D E F G) as Mahur (1972:36).

5. Nahāwand (C D Eb F) (4 2 4)

This tetrachord commonly occurs on GG, AA, C, D, F, G, A, c, and d. When this tetrachord appears on C it is called Nahawand. When it occurs on D, it is often called Busalik and occasionally called 'Ushaq (this is the root position of modes of the same names). None of these names has any clear claim to this structure in its non-C and non-D positions; thus, theorists commonly use either Nahawand or Busalik in these latter cases.

al-Hilu notes that some perceive a difference between the Busalik and 'Ushaq tetrachords. They conceive of Busalik as having the intervals (whole step, half step, whole step), while the 'Ushaq of the maqam "'Ushaq Masri" has a slightly lowered third degree (1972:127n.).

Those who seek to minimize the theoretical terminology in the name of "simplification" and "consolidation" commonly use the name Nahawand for all occurrences of this tetrachord (see al-Halqah al-Thaniyah 1964:13-14; Mash'al n.d.:101ff.; Muhammad 1984:22ff.).

6. Kurd (D Eb F G) (2 4 4)

This tetrachord commonly occurs on GG, AA, C, D, G, A, c, and d, more rarely on F and Bb.

7. Nawā Athar/Nakrīz (C D Eb F# G) (4 2 6 2)

This tetrachord occurs on C, D, F, c, and occasionally on G and Bb. The two names, Nawa Athar and Nakriz, lay equal claim to the pentachord (C D Eb F# G), Nawa Athar and Nakriz being the names of two modes which begin with this structure (C D Eb F# G Ab B c and C D Eb F# G A Bb c, respectively). When this tetrachord occurs on D, it is occasionally called Hisar, after the mode based on D (D E F G# A Bb c# d). In its other positions theorists use either "Nawa Athar" or "Nakriz," showing a slight preference for the former. Those who seek to minimize the theoretical terminology in the name of "simplification" and "consolidation" generally choose to name this structure only as "Nawa Athar" (*al-Halqah al-Thaniyah* 1964:13-14; Muhammad 1984:25ff).

8. Ḥijāz (D Eb F# G) (2 6 4)

This tetrachord occurs on GG, AA, C, D, F, G, A, c, and d. Occasionally, when on C or F, it is called Hijaz Kar instead of Hijaz (al-Shawwa 1946:31,76; al-Hilu 1972:82).

D'Erlanger and Mahfuz recognize a variety of this tetrachord called Hijaz Gharib. D'Erlanger writes that Hijaz Gharib is a Hijaz tetrachord which centers mostly on its fourth degree, i.e., on G rather than D (1933:282). Mahfuz defines Hijaz as containing the intervals, in commas (5 13 4), while Hijaz Gharib has the intervals (4 13 5), i.e, Hijaz Gharib has slightly lowered second and third degrees

(1964:280,351,362). Muhammad does not mention a Hijaz Gharib tetrachord; however, she describes a maqam called Hijaz Gharib. It differs from maqam Hijaz in that it contains a slightly raised second degree (Eb) and a slightly lowered third degree (F#) (both are said to be altered by a kuma (1984:48).

9. Ṣabā (D E-b- F Gb) (3 3 2)

This tetrachord occurs on GG, D, G, and d, and rarely on AA and A.

Rare Tetrachords Mentioned by Present-Day Cairo Theorists

(As the above list of nine tetrachords can be conceived as containing eleven distinct structures, I will continue the list by numbering the next tetrachord as number twelve.)

12. Musta'ār (E-b- F# G) (5 2)

This tetrachord occurs on BB-b-, E-b-, B-b-, and e-b-. This is the most frequently mentioned of the rare tetrachords (see *Recueil* 1934:579; D'Erlanger 1949:93-94,172,174,184,186, 226,310; al-Shawwa 1946:38,39; Mahfuz 1964:359; Fahmi 1965:62; Kamil 1975:68; Mash'al, *al-Tafsir* n.d.:100,105).

13. Sāzkār (C D# E-b- F) (6 1 3)

After Musta'ar, this is the most commonly mentioned of the rare tetrachords (see Congress 1934:547; al-Shawwa 1946:47; D'Erlanger 1949:91,180,194,314,322; Mash'al n.d.:100). It occurs on C, G, and c. Note the one-quarter-step interval between D and E-b-.

14. Ṣabā Kurd or Ṣabā Zamzamah (D Eb F Gb) (2 4 2)

This and the next tetrachord are well-known among theorists in present-day Cairo as variations of the Saba tetrachord (see Mash'al n.d.:103). It occurs on D or A.

15. Ṣabā Būsalik (D E F Gb) (4 2 2)

16. Athar Kurd (D Eb F G# A) (2 4 6 2)

This tetrachord is mentioned by Mash'al (n.d.:103) and is commonly known among institute graduates in Cairo.

17. 'Ajam Murassa' (BBb C D E-b-) or Najdī (F G A B-b- c) (4 4 3 3)

'Ajam Murassa' is mentioned in Salah al-Din (1950:102, 191); Najdi is given in D'Erlanger (1949:86,332). D'Erlanger remarks that Najdi was not considered an independent tetrachord in his day (prior to 1932); rather, musicians considered it as a Rast tetrachord on G which then settles on

F (ibid.:86).

18. Sipahr (F G# A Bb) or 'Ajam Sulṭānī (BBb C# D Eb) (6 2 2)

Sipahr is mentioned only by D'Erlanger (1949:90-91,258). He comments that this tetrachord is "very little used" and that he himself had to name the structure (after a mode in which it is found). 'Ajam Sultani is mentioned with respect to present-day practice only by 'Abd al-Halim Nuwayrah in Cairo (personal communication, 1/1983). Nuwayrah also names the tetrachord after a mode in which it appears. al-Hilu, however, writes that 'Ajam Sultani is a tetrachord which is old and no longer used (1972:83).

Rare Tetrachords Not Mentioned by Present-Day Cairo Theorists

19. Awj Arā (BB-b- C D# E-b-) (3 6 1) or (BB-b- C D# E) (3 6 2)

See D'Erlanger (1949:89-90,172,174), al-Ṣhawwa (1946:38, 39), and al-Hilu (1972:105-106). D'Erlanger comments that this tetrachord "is very rarely used; the rare Arab artists who use it have been trained in the Turkish tradition" (1949:90).

20. Rakb (D E-b- F G-b- A) (3 3 3 5)

This tetrachord is mentioned only by D'Erlanger (1949:93,290).

21. Zawīl (C D E-b- F# G) (4 3 5 2)

This tetrachord is mentioned only by D'Erlanger (1949:94-95,184,196,204,310) who comments that it results from the addition of a trichord placed below the Musta'ar trichord (ibid.:94). Mahfuz uses the term Zawil to name a completely different tetrachord, i.e., a variety of Bayyati which has a slightly raised neutral second (see above under Bayyati).

22. Suzdulār (C Db E-b- F) (2 5 3)

This tetrachord is mentioned only by Mash'al (in al-Tafsir n.d.:104). In present-day theory, Suzdular is defined as a maqam with the notes (C D E-b- F G ...). However, based on numerous references to "Suzdular without the Db" (see Recueil 1934:544; al-Hifni c.1946:149; Fahmi 1965:63), it is clear that a "Suzdular with Db" was widely known in the first part of this century. Muhammad includes a mode with the notes (C Db E-b- F G...) and calls it "Suznak Jadid," i.e., a "new Suznak" (1984:50).

23. Bahar-Shūrak (C E F) (8 2)

This tetrachord is mentioned only by D'Erlanger (1949:95-96) who acknowledges that it was not recognized by the Arab musicians of his day. It is not clear where this structure occurs for D'Erlanger does not indicate its use in any of the 119 modes he analyzes. The report of the Institute of Oriental Music (Cairo) in the 1932 Congress publication indicates a "trichord" called "Shurak" within maqam Shurak (Recueil 1934:548) but describes it as containing only the notes C BB C.

5. Joining Together Two or More Tetrachords to Form Modal Scales

As mentioned above, the Arab modes are today conceived as being formed by the joining together of two or more tetrachords. Although tetrachords played a major role in medieval Arab theory, it was not until the 1932 Congress publications that the now standard tetrachordal analysis of the modes first appeared in the modern theoretical literature (Shalfun might have included such analyses in his writings in the 1920s; see fuller discussion of this point above); further, it was not until later in the same decade that the concept of the "joining together" of tetrachords was first discussed with reference to modern-day practice (al-Hifni

1938:159-160). Following al-Hifni's introduction of the topic, discussion of tetrachord joining became a regular feature in the subsequent theoretical literature and in Cairo music institute theory classes (for example, al-Shawwa 1946:19; Salah al-Din 1950:103-104 and 199-208; D'Erlanger 1949:101-104; al-Halqah al-Thaniyah 1964:12,17,19,21-22; Fahmi 1965:77-78; al-Hilu 1972:92-93; 'Arafah 1976:21-22; Mash'al, al-Tafsir n.d.:99; Muhammad 1984:19-20; Surur 1986:114-116).

a. Terms for Conjunct, Disjunct, and Overlapping Tetrachords

After listing eight common tetrachords and describing their intervallic structures (1938:156-158), al-Hifni introduces the concept of "tetrachord joining" in a short chapter (p.159-161) entitled "Jam' and its Kinds and the Maqamat." Jam' is explained as a term used by the "ancients," i.e., medieval Arab theorists: "they joined together two jins, the combination being what they called jam' ..." (literally, "collection; combination; coupling; joining") (ibid:159). [21]

al-Hifni explains that there are two kinds of jam', munfasil and muttasil, i.e., disjunct and conjunct, respectively. He defines jam' munfasil as that which has a whole tone separating its two tetrachords and jam' muttasil as that in which the last note of the first tetrachord is the first note of the second, adding that the latter necessitates an additional whole tone above the second tetrachord in order to complete the octave. [22]

The terms *jam' munfaṣil* and *jam' muttaṣil* were used in medieval Arab theory but carried different meanings: they referred to tetrachordal structures of double-octave scales. al-Faruqi tells us (1981:120), for example, that *jam' munfaṣil* was used to mean "a scalar combination of the *ajnās* of a double octave in such a way that a whole tone separates the two inner *ajnās*," a definition she attributes to Ibn Sina (980-1037 A.D.). Ronzevalle provides two examples of *jam' munfaṣil* which illustrate this definition (1899:221):

```
tetra. | tetra. | whole tone || tetra. | tetra. | whole tone
|---------------------------||-----------------------------|
          1st octave                     2nd octave

whole tone | tetra. | tetra. || whole tone | tetra. | tetra.
|---------------------------||-----------------------------|
          1st octave                     2nd octave
```

Jam' muttaṣil was also used by al-Kindi (790-874 A.D.) and Ibn Sina to mean "a scalar combination of the *ajnās* of a double octave in which the whole tone interval of disjunction does not separate the two octaves" (al-Faruqi 1981:120). Ronzevalle provides the following example (1899:221; Ronzevalle's comments and examples also appear in al-Hilu 1972:85n):

```
tetra. | whole tone | tetra. || tetra. | whole tone | tetra.
|---------------------------||-----------------------------|
          1st octave                     2nd octave
```

Thus it is clear that modern-day theorists, while adopting traditional terms, have altered their meaning to suit the needs of modern music theory. In this case, the terms jam' munfaṣil and jam' muttaṣil have been appropriated for the analysis of single-octave structures. [23]

After adopting the terms for "conjunct" and "disjunct" tetrachords, it became apparent that an additional term was needed, for the popular maqam Saba (D E-b- F Gb A Bb c db) contains a third type of tetrachord joining: Saba's first tetrachord is commonly given as D E-b- F Gb; its second tetrachord is recognized as starting not on or after the last note of the first tetrachord as is the case with conjunct and disjunct tetrachords, respectively, but rather before the last note, i.e, from the F. Saba's second tetrachord is F Gb A Bb, i.e., a Hijaz tetrachord on F (see diagram below). In order to describe this phenomenon, the term mutadākhil (literally, "mutually penetrating" or "overlapping") was coined. Salah al-Din is the first among our sources to include the new term. He writes that there are three types of tetrachordal joining, jam' munfaṣil, jam' muttaṣil, and jam' mutadākhil (1950:103). This term is used in a number of subsequent works and is now commonly accepted as naming one of the three types of jam' in modern Arab music (see al-Halqah al-Thaniyah 1964:16; al-Faruqi 1974:91-92; Mash'al n.d.:99; Muhammad 1984:19; Surur 1986:116; it is also taught at the main Cairo music institutes).

```
          _______________
          ¦ Saba tetra.¦
          D    E-b-    F Gb        A Bb     c db
                       ¦Hijaz tetra¦
```

b. <u>Terms for the "Disjunctive" Whole Tone</u>

Another issue in modern-day discussions of tetrachord joining is the whole tone which either separates disjunct tetrachords or follows conjunct tetrachords. The former is called the <u>bu'd fāṣil</u> ("the dividing interval") by al-Hifni (1938:160; see also Muhammad 1984:19; Surur 1986:118). al-Hilu calls it the <u>fāṣil ṭanīnī</u>, i.e., the whole-step division (1972:92). The whole tone which follows conjunct tetrachords is called <u>bu'd mukammil</u> ("the concluding interval") by Salah al-Din (1950:103; see also Mash'al n.d.:99,102; Muhammad 1984:19) and <u>bu'd muḍāf</u> ("the added/adjoined interval") by al-Hifni (c.1946:178).

<u>disjunct tetrachords in maqam Rast with the disjunctive whole tone:</u>

```
     _________________       __________________
   ¦  1st  tetra.    ¦     ¦   2nd  tetra.    ¦
   C    D    E-b-    F     G     A    B-b-    c
                     ¦_____¦
                   bu'd fāṣil
```

<u>conjunct tetrachords in maqam Bayyati with the concluding whole tone:</u>

```
                                     bu'd mukammil
     __________________
   ¦   ist  tetra.    ¦                  ¦     ¦
   D   E-b-    F      G     A   Bb       c     d
                      ¦  2nd  tetra.     ¦
```

When the initial tetrachord is a trichord (as in the case of maqam Huzam), or when the first two tetrachords are overlapping (as with maqam Saba), then there are two "concluding intervals" instead of one. These are called bu`dayn mukammilayn (literally, "two concluding intervals) (Salah al-Din 1950:206):

```
maqam Huzam:                 ___________
                            |Hijaz tetra|
          E-b-    F         G Ab       B c      d    e-b-
          |_Sikah tri.|                 |_________|
                                    bu`dayn mukammilayn

maqam Saba:                 ___________
                           |Hijaz tetra|
          D    E-b-    F Gb         A Bb     c db
          |_Saba tetra.|             |________|
                                 bu`dayn mukammilayn
```

It is quite possible that all of the above terms for the "disjunctive" whole tone were coined since the 1930s. They were not, it seems, used by the medieval theorists: according to Ronzevalle (1899:221) and al-Faruqi (1981:105), al-Farabi (d.950) used another term, bu`d al-infiṣāl ("the interval of separation), for this interval whether it occurred before, between, or after the two tetrachords.

Theoretically speaking, there is a third position for the "disjunctive" whole tone, i.e., below the first two tetrachords. Most Arab theorists, however, do not recognize this division of the octave. The few who do point to its existence in maqam Hijaz Kar and maqam Nakriz, both of which begin with the notes (C D Eb F# G):

two interpretations for maqam Hijaz Kar:

```
           __________________
         ¦    Nawa Athar     ¦
         ¦ pentachord on C   ¦
         C    D Eb        F# G Ab      B c
                             ¦   Hijaz   ¦
                             ¦tetra. on G¦
```

```
               ______________
              ¦    Hijaz     ¦
              ¦ tetra on D   ¦
         C    D Eb        F# G Ab      B c
         ¦____¦              ¦   Hijaz   ¦
         initial             ¦tetra. on G¦
       whole tone
```

Mahfuz (1963:282) and al-Hifni (c.1946:192) allow the latter interpretation. Salah al-Din and others argue against it (1950:152).

c. Terms for the First, Second, and Third Tetrachords in a Given Mode

When describing the tetrachords which make up a given mode, D'Erlanger called them simply "the first *'iqd*," "the second *'iqd*," etc. (*al-'iqd al-awwal*, *al-'iqd al-thānī*, etc.; *Kitab Mu'tamar* 1933:183ff.; *Recueil* 1934:188ff.). In 1938 and c.1946 al-Hifni called them simply "the first jins" and "the second jins" (*al-jins al-awwal* and *al-jins al-thānī*; 1938:160; c.1946:170). In the following years, Arab theorists developed a number of new terms which better convey the functions that a mode's first two tetrachords are understood to play in modern-day theory and practice. Recognizing that the initial (lower) tetrachord is, today, understood to be the dominant tetrachord, the one which establishes the essential character of the mode, and also that a given lower tetrachord can be linked with a number of different upper tetrachords to form different modes, theorists came to call the lower tetrachord *jins al-jidh'* (literally, "the trunk tetrachord"), *jins al-juz'* ("the axle tetrachord"), *jins al-aṣl* ("the root, trunk, or source tetrachord"), or *jins al-rukūz* ("the base, central, or main tetrachord"). The second (upper) tetrachord was dubbed *jins al-far'* ("branch tetrachord"). The pair of terms, *al-jidh'* and *al-far'*, i.e., "trunk" and "branch," appear in Salah al-Din (1950:103 and 1960:62), *al-Halqah al-Thaniyah* (1964:12,19), and Mash'al (n.d.:99). Fahmi (1965:77) and 'Arafah (1976:21) use *al-jiz'* and *al-far'*. Today, Cairo-based theorists and music educators use the pair, *al-aṣl* and *al-far'* (Fatah Allah 1971:80; Fatah Allah et al. 1979:28-29; Shurah 1983:1; Muhammad 1984:19; Surúr 1986:114). [24] Theorists also use various terms indicating simply "lower" and "higher" such as *al-ādná* ("the lower") and *al-ā'lá* ("the higher") (Salah al-Din 1950:103; al-Hilu 1972:85,92).

In those modes where the initial tetrachord is a trichord or where the first two tetrachords overlap, present-day theorists commonly recognize a third tetrachord. Salah al-Din calls this the *jins mukammil* ("completing tetrachord") (1950:104 and 207). Muhammad calls it *jins far' al-far'* ("the branch of the branch tetrachord") (1984:19). Salah al-Din adds that such a tetrachord is either conjunct or disjunct with respect to the mode's second tetrachord (ibid:207-208). In either case the third tetrachord requires the addition of one or two notes from the mode's second octave. See the following examples: [25]

```
maqam Huzam:
                                 ____________
                                 |Hijaz tetra|                   |
           E-b-    F      G Ab        B c      d    e-b-  |   f
           | Sikah tri.|                  |   Rast tetra.     |
                                             -----------------

                                       jins mukammil muttasil or
                                          jins far` al-far`

maqam Saba:
                                ____________
                                |Hijaz tetra|               |
           D    E-b-    F Gb       A Bb      c db    |   e f
           | Saba tetra.|                   |Hijaz tetra.|
                                                  ------------

                                          jins mukammil munfasil or
                                              jins far` al-far`
```

D. The Revival of Tetrachordal Theory; Concluding Remarks:

We can not be sure of the understandings and conceptual schemes which musicians had prior to the revival of tetrachordal theory in the early twentieth century. We do, however, have D'Erlanger's comments from c.1932: "The idea of tetrachords [genre] is latent in the spirit of Arab musicians of our day although they did not attribute a special name to this fundamental element of their art" (1949:70). Indeed it is striking that as soon as the concept of tetrachord was revived theorists immediately began to include tetrachordal analyses of the modes in their studies (D'Erlanger and the Institute of Oriental Music, Cairo, both aided by `Ali

Darwish, gave detailed tetrachordal analyses of dozens of modes in the 1932 Congress publications; they were soon followed by al-Hifni [1938] 1946:170ff.; al-Shawwa 1946:18ff.; Salah al-Din 1950:103ff.; al-Hilu 1961:94ff.; *al-Halqah al-Thaniyah* 1964:21-22; Mahfuz 1964:267ff.; Fahmi 1965:56ff.; etc.). The terminology might have been newly developed or newly borrowed from medieval Arab or modern Western theory, but the apparent ease with which the "new" The identification of "tetrachord" with "mode" also occurs, on occasion, when musicians and theorists discuss a mode's second tetrachord, i.e., the *jins al-far`*. When this tetrachord is Rast on G, for example, it is common for musicians and some theorists to use the following phrases interchangeably: "the mode has a Rast tetrachord on G," "it has Rast on G," or even, "it has the Rast mode [*naghmat* Rast] on G" (see al-Shawwa 1946:42 and 70; Kamil 1975:53,54, and 67). In these cases, tetrachord and mode are not mutually distinct phenomenona. For the musician, then, there is little difference if, in maqam Sikah, for example, he thinks of there being "Rast on G" or "the first part of maqam Rast on G" or "a Rast tetrachord on G."

maqam Sikah:
E-b- F G A B-b- c d e-b-

It is this sense of "tetrachord/mode" that seems to have existed in the minds of Arab musicians during the late-nineteenth, early-twentieth centuries, i.e., prior to the revival of explicit tetrachordal theory, a theory that isolates, measures, and categorizes the tetrachords used in modern Arab music.

NOTES FOR CHAPTER VI

1. In this work, the word "tetrachord" is used in the general sense referring equally to structures of three, four, and five notes. When I want to specify a tetrachord of four notes I write "tetrachord(4)." Those who write in French often use the word "genre" for this general sense of "tetrachord." See, for example D'Erlanger (1949), Touma (1977), and portions of the 1932 Congress publication (Recueil 1934).

2. The Nawa Athar tetrachord is also called by the name Nakriz.

3. One might also attempt a list of the tetrachords organized by relative status or frequency of use. Although such a ranking is not traditional and is subjective in nature, it does bring up some commonly acknowledged points. First, Rast is considered the most fundamental of all the tetrachords since it occurs in the first four notes of the fundamental Arab scale (Rast, Dukah, Sikah, and Jaharkah, i.e., C D E-b- F). Second, Rast and Bayyati are probably the two most commonly used tetrachords, followed by Nahawand and Hijaz. Third, 'Ajam, Nawa Athar, and perhaps Kurd are probably the least-used.

4. As for the relative status of the three new tetrachords(4), Huzam falls in the category of those which are commonly used, while 'Iraq and Sikah are generally little used.

5. See, for example, Wright's discussion of the tetrachordal theories of Safi al-Din (d.1294)(1978:20ff.).

6. The Greek roots of medieval Arab tetrachordal theory has not been lost on modern writers. Ronzevalle, for example, gives Greek equivalents for a number of the terms used in medieval Arab theory (this within his critical edition of Mashaqah's treatise: 1899,220-221 and 726). al-Hilu writes, "The Arabs took the rules and the theory of the ajnās from the Greeks and the Persians" (1972:80).

7. al-Faruqi, for example, writes "An essential feature of Arabic music throughout its history is its organization of tones into ajnās (s. jins)." (1974:79).

8. Walter Feldman reports a similar absence of tetrachordal theory in Turkish music theory of the eighteenth and nineteenth centuries (personal communication 12/27/87).

9. D'Erlanger mentions an earlier application of tetrachordal theory to modern practice (1949:71): Iskandar Shalfun

discussed tetrachords with respect to the modern scales in one of his publications (D'Erlanger's statement to this effect is quoted below, p.281). Unfortunately, D'Erlanger does not tell us in which of Shalfun's publications this occurs. From D'Erlanger's bibliography we know that Shalfun's writings were all published between 1920 to 1928 (ibid.:407).

10. ‘Ali Darwish's role in both presentations is mentioned on pp.133 and 143 of the 1934 publication.

11. D'Erlanger translated the works of al-Farabi, Ibn Sina, Safi al-Din and others into French. Most, if not all, of these translations were carried out prior to the 1932 Congress. (D'Erlanger died six months after the Congress was held. The first volume of his work was published in 1930; others followed soon after, in 1935, 1938, and 1939.) al-Hifni studied the theories of Ibn Sina (the topic of his doctoral dissertation in 1930; see al-Faruqi 1981:502) and al-Kindi (resulting in a publication on the subject in 1931; see the list of his publications in al-Hifni c.1946:341). Significantly, Rauf Yekta Bey had already introduced tetrachordal theory into modern Turkish theory (Yekta Bey 1922).

12. See note 9 above and brief comments on Shalfun in Chapter I, p.51 . See also D'Erlanger's biographical note on Shalfun (1949:378-380).

al-Faruqi gives a different voweling for the Arabic word and thus states the new term to be *‘aqd* (pl. *‘uqūd*), literally, "tie, knotting, circle (1981:15).

13. Ronzevalle had used the term *jins* in a discussion of Greek and medieval Arab music theory (1899:726). The use of *jins* in the Congress publications is the first time that this term was applied to modern Arab music.

14. *TajnIs* existed as a term in medieval Arab theory, for example, in the writings of al-Farabi (d.950), but there it was used to refer to four types of tetrachords which encompass the interval of a perfect fourth (see al-Faruqi 1981:337). It was not used to refer to trichords.

15. The adjective "tamm" was also used in medieval Arab theory but apparently was not applied to the concept of a perfect fourth. For example, al-Farabi used "jam‘ tāmm" to refer to the double octave (Ronzevalle 1899:220: al-Faruqi 1981:121).

16. Hijaz is the name of the northwestern part of Saudi Arabia. Nahawand is named after a city in Iran. Nadji, a rare tetrachord mentioned only by D'Erlanger (1949:86), is the name of the highland region in Saudi Arabia.

17. Rast and 'Iraq are examples of the same name being used to designate the same tetrachordal structure from the medieval to the modern period (see Wright 1978:49-50).

18. D'Erlanger's presentation of the tetrachords is remarkable for a number of reasons besides the explicit nature of his classification system. For one, he provides a brief historical survey for each tetrachord, commenting on how it was named in ancient Greek, ancient Arab (pre-thirteenth century), thirteenth-century Arab, modern-day Western (when applicable), and modern-day Arab theory. Second, D'Erlanger includes a number of rare tetrachords, a few of which are not mentioned by any other modern writer (see comments within the list of tetrachords given below). D'Erlanger also mentions variant names for the different tetrachordal structures and indicates where in the general scale each tetrachord commonly occurs in modern practice (these two points are be discussed below).

19. al-Hilu's presentation of eleven tetrachords (1961:82) seems to be independent of the 1961-63 halqah's pronouncements on the subject.

20. D'Erlanger, our sole source for three of the rare structures, admits that the tetrachords Najdi, Awj Ara, Sipahr, and Bahar-Shurak were either "very rare" or not recognized by musicians of his day (D'Erlanger's remarks to this effect are noted in the following list). It is unfortunate that these comments were ignored when D'Erlanger's list of seventeen tetrachords (compiled before his death in 1932) was given in the New Grove's as the tetrachords "now in use" (1980 v.1:523).

21. The fact that al-Hifni quotes medieval instead of modern usage when defining the term jam' supports the idea that tetrachordal theory was a lost tradition that was being revived.

22. When introducing the concept of conjunct and disjunct tetrachords, al-Hifni gives the C major and A minor scales of Western music as examples before starting the analysis of the Arab modes (1938:159-160). (al-Hilu copies most of al-Hifni's presentation including his use of the C major scale; 1972:92.) See Chapter I for a discussion of the place of Western music theory within the presentation of Arab theory.

23. Although the double octave of medieval theory was retained in the form of the two-octave general scale of the modern period (Yakah/GG to jawab Nawa/g), it is given little importance in present-day descriptions of the modes.

24. Present-day Cairo-based theorists and music educators have rejected the term al-jidhʿ and now use al-aṣl exclusively when referring to a mode's initial (lower) tetrachord. Fatah Allah (1971:81n) is the first to object to al-jidhʿ (see also Fatah Allah et al. 1979:28n).

25. The present discussion considers only those tetrachords which are considered primary to a mode's composition. Theories which recognize additional tetrachords are discussed in Section D of Chapter X below.

CHAPTER VII: TERMS FOR MODE

Maqam, Naghamah, and Lahn

The melodic modes are universally recognized as the dominant feature governing melodic practice in Arab music. As a group, the modes have been called by many different names since the earliest years of the medieval period. al-Faruqi lists the following: *jam‘*, *nagham*, *asābi‘*, *dawr*, *ṭarīqah*, *āwāz*, *shu‘bah*, *ṭibā‘*, and *shadd* (1974:91). Shiloah, commenting on terms used in the thirteenth and following centuries, writes that while *anghām* (s. *naghamah*) was "a generic name for all the modal skeletons" the main modes were "most often called *maqāmāt*, but also *shudūd*, *alḥān*, *uṣūl*, *bardāwāt*, *hunūk* or *ahnāk* (s. *hank*)" (1981:35).

In the modern period, three terms have been used: *laḥn* (pl. *alḥān*), *naghamah* or *nagham* (pl. *naghamāt* or *anghām*), and *maqām* (pl. *maqāmāt*). *Alḥān* is the least common of the three, having been used exclusively only by Mashaqah ([c.1840] 1899:726ff.). A few writers acknowledge *laḥn* as one of the terms for "mode" but they then proceed to use either *maqām* or *naghamah*/*nagham* in their own presentations. al-Khula‘i (1904:41), for example, introduces his chapter on the modes with a title which gives *maqāmāt* as the primary term and *alḥān* as a synonym: "Naẓm Ṭuruq al-Maqāmāt (al-Alḥān)." But in his text al-Khula‘i uses *maqāmāt* for the most part, using *alḥān* only in sections copied from Mashaqah's work (see p.37). Similarly, al-Hilu includes *lahn* as one of the terms for "mode" (1972:67; see quote below), but he does not use this term in his own discussions of the modes. While *alhan* is still used on occasion to refer to the melodic modes, it is more commonly confined to carrying the meaning of "tune," i.e., a specific melody. This connotation is supported by two related words which share the same triradical root, (l h n), i.e., *mulaḥḥan* (composer) and *laḥḥan* (to compose). Thus a composer (*mulaḥḥan*) composes (*yilaḥḥan*) specific melodies called *alḥān*. [1]

The two remaining terms, *maqām* and *naghamah*, exist side by side and seem to be used equally and interchangeably by present-day musicians. In print, however, the term *maqām* has assumed the dominant position, with a vast majority of the printed sources using *maqām* exclusively in their discussions of the Arab modes. [2] Perhaps in recognition of this point, Jargy writes that the modes, "formerly [called] *naghma* [*naghamah*], ... commonly carry the name *maqām* in the modern period" (1971:56).

One of the factors which has contributed to the prominence of the term *maqām* is the belief that *naghamah* should be used exclusively to mean "note." Shihab al-Din (c.1840), for example, wrote that "*naghamāt* is the plural of *naghamah* with the meaning of the single and simple sound ... (1892:11; al-Khula'i copies this passage; 1904:28). al-Hilu expounds on this point. After stating that *maqām*, *naghamah*, and *lahn* all "mean the same thing" (1972:67), he adds a footnote in which he quotes from the medieval theorist ‘Abd al-Qadir Ibn Ghaybi (d.1435): "The *naghamah* is a single sound which lingers for a time [and] has sensual/tangible value upon the body which experiences it." al-Hilu concludes, "It is wrong if we say that this ... piece of music is in *naghamat* Hijaz [3], for example, or Bayyati, or Rast, etc. For *naghamah* denotes a single ... note without moving to another note. Therefore it is more correct to say, 'this piece of music is in *maqam* such and such and not in *naghamat* such and such." Mahmud Kamil also supports this understanding (1975:48): "The musical maqam is made up of a group of notes [*naghamāt*]; for this reason it is wrong to say that a given melody [*lahn*] is in such and such a *naghamah*. Rather it is correct to say [that it is] in such and such a *maqām*."

Despite such statements, *naghamah* as "mode" continues to exist in common speech and appears in a number of published works. D'Erlanger, for example, uses "*naghma*" exclusively (*Recueil* 1933 and D'Erlanger 1949), saying that the musicians he worked with used this term (1949:99). al-Sabbagh uses *nagham*, pl *anghām*, but acknowledges that "some call it *maqām*" (1950:36). Similarly, Farah (1974:75) writes, "In Arab music there are numerous musical scales each of which are called *maqām* or *naghamah*," however, in his own presentation of the modes he uses *naghamah*, pl. *anghām* (ibid.:83ff.).

Others use both terms interchangeably (al-Shawwa 1946; Mahfuz 1963:258; 'Arafah 1976:15,20-22; Mash'al 1979:34; Muhammad 1984:37). [4]

In addition to the above terms, theorists in the present day occasionally use sullam ("scale") as a synonym for maqam or naghamah (Salah al-Din c.1950:24; al-Hilu 1972:71n; etc.). The emergence of the idea that "maqam" can be equated with "scale" is discussed below in Section B of Chapter X.

The Derivation of Maqam as "Mode"

In his Dictionary of Modern Written Arabic, Wehr defines the word maqām as "site, location, position; place, spot, locality; situation; station; standing, position, rank, dignity; tomb of a saint, sacred place; key, tonality, mode (music)" (1976:800-801). It is from the meaning of 'position' or 'place' that the word has come to be used in the realm of music. Initially, it is commonly stated, maqām referred to "the place or platform on which the performers used to stand" (Gerson Kiwi 1970:67; see Touma 1975:8) before the word was transferred to refer to the music being performed. Touma argues that the word initially "applied to the place where people assembled to hear the music" rather than to the performers' stage (ibid.).

In the modern theoretical literature maqām is used with two general meanings, i.e., "mode" and "note position." With this latter meaning, it is used, most conservatively, to refer only to the positions of the notes in the fundamental scale. See, for example, p. 74 above where the Arabic/ Persian note names Yakah, Dukah, Sikah, etc. are translated as "the first maqām," "the second maqām," "the third maqām," etc. Using this meaning 'Arafah and 'Ali (1978:16-17) and Mash'al (in al-Tafsir n.d.:57-60) identify fifteen different maqāmāt, i.e., the notes GG AA BB-b- C D E-b- F G A B-b- c d e-b- f and g. Shihab al-Din ([c.1840] 1892:11), al-Khula'i (1904:28), and others, however, use the term to refer to all the note positions of the general scale, i.e., twenty-four per octave. [5]

Maqam as "mode" ultimately derives from this meaning of "a particular place in the general scale of all pitches available in the system" (Powers 1980:423). Gerson-Kiwi explains that "the maqāmāt [here, note positions] were meant to be the tonics of a number of melody patterns assigned to each of them" (1970:67). Thus, there are or have been separate maqāmāt (here, modes) called Yakah, 'Ushayran, 'Iraq, Rast, Dukah, Sikah, Jaharkah, Nawa, Husayni, Awj, Mahur or Kirdan (alternative names for the note c), Muhayyar, Buzrak, Mahuran, and Ramal Tuti, i.e., all the notes of the fundamental scale (all except Kirdan are included in Mashaqah's c.1840 list of modes). Of the fourteen 'arabāt, there are or have been maqamat of the same names in all but one or two cases (there is no mention in the modern sources of maqamat called Kawasht [BB] or Sinbulah [e]).

The word "maqam" first appears with the meaning of "mode" at least as early as the fourteenth century. al-Faruqi cites its occurrence in the *Durrat al-Taj* (c.1300) of Qutb al-Din al-Shirazi (1981:169; Wright gives the original Persian text and an English translation of the passage; 1978:290 and 180). Touma notes the use of *maqam* as "mode" in three other fourteenth- and fifteenth-century works (1975:5-6).

The coexistence of *maqām* as "mode" and *maqām* as "note" and also of both *naghamah* and *maqām* as "mode" is seen in the following passage from Mash'al (1979:34): "The mode [*naghamah*] Nakriz: it is the same as the mode [*maqām*] Hijaz in terms of the accidental signs [needed for transcription on the Western staff] except that it centers on the note [*maqām*] Rast [i.e, C]" (Nakriz has the notes C D Eb F# G A Bb c while Hijaz has D Eb F# G A Bb c d).

The extent to which the word *maqāmāt* exists apart for the above music-related contexts (meaning either rank[s], saints' tombs, or, as the plural of *maqāmah*, referring to a genre of Arabic prose) can be seen by the fact that Kamil (1975:48) and Mash'al (n.d.:36,60,etc.) feel compelled to qualify the word with the adjective *mūsīqiyyah*, i.e., "musical"; thus *al-maqāmāt al-mūsīqiyyah*, i.e., "the musical maqamat," meaning the melodic modes.

NOTES TO CHAPTER VII

1. Al-Hilu notes a specific use for the term *lahn* which assumes that modes are most commonly composed of those notes which are called the fundamental notes of Arab music (see the three-fold classification of pitches in Chapter II).

> The modes in which some of the fundamental notes [*al-naghamāt al-aṣliyyah*] are replaced: a) if one note is changed in it, it [the mode] is called by the name of the new note; and it is not permitted to call it [the mode] by the name *maqam* but rather it should be called a "*laḥn*" such as *laḥn* Saba and Hijaz and Kurd ... (1972:84).

This use of the term *laḥn* is not mentioned in any of the other sources used for the present study. As al-Hilu does not, himself, use the term in the indicated fashion in his own work, it is likely that he has taken this passage (without citation) from another source. The assumption that most modes use only fundamental notes is found in Mashaqah's c.1840 work (see Chapter IX, section C.3 below). Thus, it is likely that this passage comes from an early-nineteenth century source. (It does not appear in Mashaqah's work.)

2. Those who use the term *maqām* exclusively include both Arab and Western sources: al-Hifni 1946:121ff.; *Al-Halqah* 1964; Fahmi 1965; Spector 1970; Gerson-Kiwi 1970; Carmi-Cohen 1964;, Olsen (1974), Bulos 1971:7ff.; Jargy 1971:56; Hafiz 1971:182; al-Faruqi 1974:90; Jabaqji 1976; Nettl and Riddle 1977:11; Touma 1977:32; `Arafah and `Ali 1978; Qatr n.d.; al-Masri and Kamil 1979; Nasir 1980; `Iffat n.d.; Mash`al n.d.:60ff.; Fatah Allah and Kamil 1982; Shurah 1983; Racy 1983:131; and Pacholczyk 1980:522-523.

3. When an Arabic word ending in the letter *ta' marbūṭah* (transliterated as a final "h") appears connected to a following noun in an *idafah* construction, then the *ta' marbūṭah* is transliterated by a "t." For example, *naghamah* becomes *naghamat* when it is connected to a maqam name; thus *naghamat* Hijaz. This is not to be confused with the plural of *naghamah*, i.e., *naghamāt*, since the plural contains a lengthening of the final vowel.

4. Even al-Hilu and Kamil, who write against using *naghamah* as "mode", do not succeed in keeping their own publications free of this "offending" usage (see al-Hilu 1972:71,83,etc. and Kamil 1975:46,56,59,etc.).

5. Shihab al-Din actually says that there are twenty-eight maqamat per octave. After quoting this passage, al-Khula`i (1904:30) comments that there are really only twenty-four.

CHAPTER VIII: HOW MANY MAQAMAT ARE THERE?

"The maqamat ... are an open-ended and expandable collection comprising a large and indefinite number of entities" (Powers 1981:503). This aspect of the maqam system has been understood by theorists throughout the modern period. Mashaqah, for example, comments that the potential for new modes "is without end" ([c.1840] 1899:932). Ronzevalle offers the following commentary to Mashaqah's statement (ibid.: n.3): "The reason is clear as there is nothing which prevents you from arranging the notes ... in a sequence which differs from all the sequences [which Mashaqah has mentioned] except good taste ..." More recently, al-Hilu has written, "As for producing [new] maqamat, there is no restriction and there is no end to it (1972:87; see also D'Erlanger 1949:99).

When musicians or theorists are asked how many maqamat there are, the most common responses are, "I don't know," and, "There is no end to the maqamat," for it is truly an open-ended system. But when musician or theorist ventures beyond this initial response, there are generally three categories of answers. First, there are answers which reflect an ideal, the most common being, "I have heard that there are 360 maqamat, one for every day of the year" (George Michel, personal communication 9/82). This figure is mentioned in a number of theoretical works including Fahmi

(1965:73), al-Hilu (1972:72), and Muhammad (1984:21). al-Hilu adds another such answer (ibid.): "It has been said in some Arab books [of old] that the [maqamat] reach one thousand [in number]."

A second type of answer attempts to count every known and distinctly named maqam. The largest lists in this category do not reflect the knowledge of any one individual but rather are the result of conscious efforts at collecting maqamat. `Ali Darwish, for example, is said to have collected "the maqamat of Syria and Aleppo" (Ibn Dhurayl 1969:44). The results of his efforts, a list of ninety-five modes, form the basis for D'Erlanger's report in the 1932 Congress publication (see Recueil 1934:141ff.). Other attempts at compiling comprehen- sive lists include the following: Mashaqah who describes "the alhan known in our time in Syria, being ninety-five in number" ([c.1840] 1899:932) [1]; D'Erlanger's expanded list of 119 modes "chosen from among the best known among the musicians of the Arab countries of the Orient" (1949:111); al-Shawwa's presentation of 108 modes which includes "all the current maqamat and a large number of rare maqamat" (1946:99); Muhammad's list of seventy-two modes which includes "every maqam from the widespread and used maqamat" (1984:33); the Institute of Oriental Music's list of fifty-two modes being "all the maqamat used in Egypt" (Recueil 1934:134); and Salah al-Din's list of sixty-two modes said to contain "all the maqamat known and current in Egypt" (al-Halqah 1964:20). In addition, Salah al-Din discusses ninety-two modes in a 1950 publication.

A third category of answers is provided by those who are content to name only the main, the most common maqamat. Such lists might contain as few as eight or ten and as many as forty maqamat.

The various sizes of these lists show that the issue of how many modes there are in Arab music is a complex one. (A chart summarizing the number of maqamat mentioned in the various sources is given at the end of this chapter.) Any attempt at answering this question will be influenced by a large number of factors including the audience for whom the question is being answered, whether or not one should consider rare and little-used modes, the background of the musicians who serve as one's informants, and the temporal and geographical focus of the study. A number of these points will be discussed in turn.

A. Common Versus Rare Modes

The disparity between the largest and smallest lists is less than it might seem at first for it is widely recognized that many of the modes in the larger lists are rarely, if ever, used. D'Erlanger, for example, qualifies (if not contradicts) his statement that his 119 maqamat were "chosen from among the best known" when he writes that "of all these modes, hardly thirty are, however, in common use; and this number is reduced still further if we keep only to the practical music, that of cafe-concerts and of popular songs" (1949:111). A number of theorists have recognized a separate category of modes called "the principal maqamat" (*al-maqāmāt al-asāsiyyah*). The members of the 1961-63 Cairo conference included eleven modes in this category, i.e., `Ajam, Nahawand, Rast, Bayyati, Saba, Hijaz, Kurd, Nawa Athar, Sikah, `Iraq, and Huzam (*al-Halqah* 1964:14; see also Surur 1986:120). Muhammad includes only the first nine of these in her list of the principal maqamat (1984:21). Similarly, Salah al-Din and al-Sabbagh recognize eight and ten principal modes, respectively (Salah al-Din 1964:21-22, see also Jabaqji 1976:51; al-Sabbagh 1950:53). al-Sabbagh calls this group "the fundamental modes," i.e., *al-anghām al-aṣliyyah*. (This category of modes is discussed further in Chapter IX.)

The Principal Maqamat:

al-Halqah	Muhammad	Salah al-Din	al-Sabbagh
`Ajam	`Ajam `Ushayran	`Ajam	`Ajam `Ushayran
Nahawand	Nahawand	Nahawand	Nahawand
Rast	Rast	Rast	Rast
Bayyati	Bayyati	Bayyati	Bayyati
Saba	Saba	Saba	Saba
Hijaz	Hijaz	Hijaz	Hijaz
Kurd	Kurd	Kurd	Kurd
Nawa Athar	Nawa Athar	--	--
Sikah	Sikah	Sikah	--
`Iraq			`Iraq
Huzam			Huzam(Sikah `Arabi)
			Jaharkah

Among our sources, only al-Shawwa admits a category called "rare/neglected maqamat" (anghām muhmalah) (1946:16). Of the 108 modes al-Shawwa describes, fourteen are included in this category. According to al-Shawwa, these fourteen represent only "some" of the rare/neglected modes.

Thus, it is commonly recognized that there are a dozen or so maqamat which make up the core of the common performance practice. These modes are mentioned in virtually every source which lists the maqamat (over forty-five such sources have been surveyed for the present study). Dozens of other modes are so obscure that they are mentioned in only a single work.

B. Different Musics Use Different Numbers of Modes

As D'Erlanger has suggested, the answer to the question of the number of maqamat used in Arab music depends, in part, on who one uses as informants, for different groups of musicians have different modal reportoires. A cursory study of the various musics which exist in Cairo in the present day reveals three different levels of modal reportoires. First, folk musicians, especially performers of musics known as mizmār/ṭabl baladī and madīh al-nabī, generally name seven or eight maqamat that are used in their music. These include Rast, Bayyati, Huzam (called Sikah), Hijaz, and Saba. A second level includes the "mainstream" or "popular" vocal repertoire performed by such singers as Umm Kulthūm, `Abd al-Ḥalīm Ḥāfiz, Fayrūz, and Wardah. It is commonly said that this music uses a core repertoire of about twelve maqamat but occasionally makes use of another dozen or so modes. A third level includes the music of "academic" composers, i.e., composers well-versed in the maqam system who enjoy using rarer modes in their compositions. There were a large number of such composers in the late-nineteenth, early-twentieth centuries (see Chapter I.B.) and a small but active group in the present day (including `Abd al-Ḥalīm Nuwayrah and `Aṭiyyah Sharārah in Cairo). This body of music, performed by ensembles such as the Firqat al-Mūsīqá al-`Arabiyyah in Cairo, uses the same core group of modes found in the "popular" music, but here an additional fifteen or so modes occur somewhat commonly and another twenty or thirty modes occur only on occasion. (See Kamil 1975:49ff. who lists pieces in each of the forty-one modes he discusses. See also Jabaqji's multi-volume <u>al-Mawsu`ah al-Musiqiyyah</u> which includes transcriptions of pieces in many rare maqamat.) [2]

C. Some Maqamat Fade From Use; Others Are Newly Invented, Imported, or Revived

Another reason why it is difficult to ascertain the exact number of maqamat is that the modes which are used are subject to change over time. New modes are introduced while others fade first from use and then from memory.

1. Modes Fade From Use

Mashaqah ([c.1840] 1899:727ff. and 1913:87ff.) describes more than forty-five modes that were known to the "learned of Syria" in the first part of the nineteenth century but which are not recognized in the present-day. While the Arabic literature contains no direct references to the disappearance of these modes, Idelsohn does document the loss of popularity of maqam Nawa at the beginning of the twentieth century. Maqam Nawa was popular "a generation ago," he tells us; however, it was being used less and less in the early years of the twentieth century (1913:47). Today, most musicians agree that there is no mode of this name. This process of gradually fading from existence has undoubtedly been repeated with respect to dozens of maqamat over the last hundred years.

2. Importing New Modes

The open-ended nature of the maqam system has meant that new modes could be introduced at any time. In the modern period new maqamat have resulted from importation, invention, and revival of neglected modes. The most significant source of new modes in the period has been importation from Turkish music. In large part because of patronage received from the Ottoman court (see below) and the Mevlevi order of dervishes, Turkish music developed a classical art form which impressed Arab musicians with its erudition and also with its use of modal structures unknown in the Arab world. Mashaqah, for example, comments ([c.1840] 1899:932; 1913:104), "Perhaps the modes now known among the learned of Constantinople are more in number than [those known among the learned of Syria]." In his work Mashaqah includes at least three modes which seem to have been introduced into Syria from Turkish practice. First, after describing maqam Hijazkah (Hijaz Kar?; see Smith 1847:187 who gives this spelling), he writes, "Thus the masters of Constantinople have described it" (1899:730; 1913:91). Second is a mode called Nahaft al-Atrak, i.e., Nahaft (Nihuft?) of the Turks. The name serves to distinguish this mode from another called Nahaft al-'Arab, i.e., Nahaft of the Arabs (1899:727). Lastly, a mode called Dukah is said to be alternatively called 'Ushaq al-Atrak, i.e., 'Ushaq of the Turks (ibid.:883). [3]

A remark by al-Khula'i shows that Arab musicians in his day considered the modes which were unique to Turkish music to be part of the as-yet-unexploited resources available to Arab music. After discussing a number of maqamat which were used in Egypt, he writes (1904:43n), "If you wish numerous other structures ... then you should make use of the [following] publications ..." Besides mentioning treatises written by the Egyptian Muhammad Dhakir (1895-96) and the Syrian Mashaqah, al-Khula'i directs his readers to "the works of al-Sayyid Muhammad Hasham Bey published in Istanbul, some in 1269 H. [1851-52] and others in 1280 H. [1863-64]," "the book *Qirā'at Naghamāt* published in Instanbul in 1304 H. [1886-87] and the book *Mūsīqá Iṣtilaḥātī* published in Istanbul in 1310 H. [1892-93]." By naming these sources, al-Khula‘i indicates that he is ready to accept Turkish modes into Arab music. He also reveals that written sources, specifically treatises by Turkish scholars, played a role in the introduction of these modes into Arab music.

More important than written sources, however, was the role played by individual musicians. al-Khulai‘i, for example, writes the following about ‘Abduh al-Hamuli whom Kamil (1975:166) dates 1841-1901: "... Because of the beauty of [al-Hamuli's] singing ... Isma‘il Basha [the ruler of Egypt from 1863-1879] admitted him into his entourage and traveled with him several times to Istanbul... Isma‘il, upon his return to Egypt, also brought back a group of the best [Turkish] singers" (1904:142). Thus, while in Istanbul and while with these singers in Egypt, al-Hamuli learned many modes "which Egyptians had no knowledge of ... such as Nahawand, Hijaz Kar, ‘Ajam and others. He introduced them into Egyptian vocal *adwar* [s. *dawr*] and into the remaining vocal genres of that period" (ibid.; see Kamil 1975:92 who confirms much of this story).

Kamil mentions a similar role played by Muhammad ‘Uthman (1855-1900) and Ibrahim al-Qabbani (1854-1927). ‘Uthman "traveled to Turkey on an artistic tour and benefited greatly from this tour as he used maqam Shawq Afza for the first time in [Egyptian] songs, composing in it the dawr "al-Yawm Safa Da'a al-Tarab" (1975:94). al-Qabbani is called the first to use the maqamat Rahat al-Arwah, Majlis Afruz, and Bastanikar in Egyptian music, composing a dawr in each of these modes ("Alhan Zaman," a Cairo radio program written by Kamil, broadcast 10/31/87).

Some Arab musicians also learned Turkish modes by going to Turkey to study. 'Ali Darwish (1874-1952), for example, graduated from a music institute in Istanbul called Dar al-Alhan (Ibn Dhurayl 1969:14-15). [4] Knowledge of Turkish modes would also have been introduced to the Arab world by musicians of the Mevlevi order of Sufis for this sect (which relies heavily on Turkish classical music in its rituals) had tekes (religious orders/monasteries) in many of the Arab countries. 'Ali Darwish was himself a nāy player in a Mevlevi ensemble in Aleppo, Syria, the city of his birth (D'Erlanger 1949:380).

While no one has as yet compiled a comprehensive list of the modes adopted into Arab music from Turkish practice, a partial list includes the modes Suznak, Shatt 'Araban, Nawa Athar, Shawq Afza, Hijaz Kar, Farah Faza, Suzdilar, Hijazayn, Basandidah, Sultani Yakah, Saba Busalik, Farahnak, Tarz Jadid, Tarz Nuwin, and Hijaz Kar Kurd (see Section 3, below). [5]

Learning new modes from neighboring countries was not limited to the Arab world taking modes from Turkey. This process also occurred within the Arab world. In the nineteenth and early-twentieth centuries, for example, modes unique to Egyptian or Syrian practice were adopted throughout the Arab Middle East. [6] In Mashaqah's work (c.1840), there are a few comments and a number of maqam names which refer to a separate Egyptian practice in his time (Mashaqah, born in Lebanon in 1800, first studied music while in Damietta, Egypt for some three years before settling in Damascus; see Chapter I.C.). There is a mode called Shawark Masri, i.e., the Egyptian Shawark (1899:731) and another called al-Husayni al-Masri, i.e., the Egyptian Husayni (ibid.:931). In the present-day, many theorists follow this pattern and mention a mode called `Ushaq Masri. Mashaqah also notes that the modes Sikah and Saba were played differently in Egypt and Syria in his day. The former contained the note A natural (Husayni) in Syria but Ab (Hisar) in Egypt (ibid.:928). [7]

Of these references to Egyptian practice, Mashaqah's comments about maqam Saba are probably the most significant for the present discussion. The modern-day maqam Saba of Arab music (be it Syria or Egypt) uses the notes (D E-b- F Gb A Bb c db ...). However, when Mashaqah describes maqam Saba as it was practiced in Syria in his day there is no mention of the now characteristic Gb: "Saba ... it is that [the note] Jaharkah is shown, and Husayni is touched upon, then

Jaharkah, Sikah, Dukah," i.e., F, then A is touched upon, then F, E-b-, D (ibid.:882). In addition, the Gb is not mentioned in four other modes which Mashaqah says contain movements from maqam Saba (see he comments for the modes Saba Humayun, Saba Husayni, Shuruqi, and al-Ma'uranna' al-Rumi; pp.883,888,888, and 889 respectively; or see 1913:92,96-97). But when describing a mode called Saba Chawish, Mashaqah gives a melodic line which uses on the modern-day Saba scale (i.e., with its Gb) and adds the comment, "In our day, Egyptian singers use movements from this mode frequently in their songs in [maqam] Saba ..." (1899:884). From this testimony, it seems that it was the Egyptian version of maqam Saba that came to be adopted throughout the Arab world. (Maqam Saba of seventeenth- and eighteenth-century Turkish music also used the note Gb.)

Although the issue is not specifically addressed in the literature, available evidence suggests that the dominant borrowing within the Arab world was from Syria to Egypt and not the other way around. al-Khula`i, for example, describes only six D-based modes in his presentation of maqamat used in Egypt (1904:37 and 43-44) but he refers his reader to Mashaqah's treatise for additional modes. Mashaqah, presenting the modes "known in Syria," describes forty-one D-based modes. Thus, as was the case with Turkish modes, we see that any "new" modes found in Syrian practice were considered part of the available but as-yet-untapped resources of Egyptian music. [8] The only explicit statement of a mode entering Egyptian practice from Syria is a remark by the historian, Mahmud Kamil, that Sayyid Darwish introduced Zingaran into Egyptian music having learned of the mode in Syria from 'Uthman al-Mawsili (personal communication 6/16/86).

Available evidence suggests that the period of modal borrowing (mostly from Turkey, but also from Syria and Egypt) was concentrated in the nineteenth and the first one or two decades of the twentieth centuries. (The sources for the present study do not discuss modal borrowings prior to the nineteenth century.) This period corresponds to what I have called the "academic" period of modern Arab music performance. (The theorists who document this period make up what I have called the middle-period school of modern Arab music theory.) Such borrowings were brought to an end by three factors. First of all, practically speaking, the three regions each had a finite number of modes which were unknown in the other regions. Once a majority of these modes were introduced into the neighboring regions, there were no (or few) "new" modes to be borrowed. Secondly, an "academic" movement in Cairo in the late-nineteenth and early-twentieth centuries encouraged composers to seek out new maqamat. This movement served to "complete" the process of adopting available modes from neighboring countries. And last, there was an increase in contact among the music cultures of Syria, Lebanon, and Egypt at the beginning of the twentieth century as a result of new forms of mass media (records, films, and radio). This helped bring any new modes to the immediate attention of composers throughout the region. Thus, while it is clear from the above that the answer to the question of the number of maqamat used in Arab music depended, in the past, on the geographical focus of one's study, today it is commonly felt that Arab music throughout the region (be it in Syria, Lebanon, or Egypt) uses the same group of maqamat.

3. Inventing New Modes / Reviving Neglected Modes

Another way that the number of maqamat have changed over time is that musicians have invented new modes. While this has undoubtedly occurred from time to time in the Arab world, the largest production of new maqamat over the last few centuries has occurred in Turkey. This process was encouraged by sultans of the Ottoman empire (especially Selim III, r.1789-1807) who offered purses of gold to those creating new modes (Walter Feldman, personal communication 12/28/87). Among the modes used in modern-day Arab music which were invented by Turkish musicians, there are the following: Suznak and Farah Faza, invented by Vardakosta Ahmad Aga (1728?-1794), the former in 1785 (Oztuna 1969:17 and 218; Oztuna admits that there is some controversy concerning the attribution of Farah Faza to this composer);

Nawa Athar, Saba Busalik, and Sultani Yakah, invented by Isma'il Dede Efendi (1778-1846), the latter as a present to Sultan Mahmud II (r.1808-1839) (Oztuna 1969:304 and 1976:250); Suzdilara, Shawq Afza, Basandidah, Hijazayn, and Awj Ara, invented by Selim III (1761-1808); Selim III invented fourteen maqamat in all (Oztuna 1976:221); Shatt 'Araban, invented in 1550, probably by Gazi Gira (ibid.:272); Farahnak, invented in 1820 by Shakir Aga (Oztuna 1969:218); Tarz Jadid, invented in 1850 by Kazaker Mustafa Izzet Efendi (Oztuna 1976:306); Tarz Nuwin, invented by Hashim Bey (ibid.:306); Suzdil, invented in 1785 by Abdul Halim Aga (ibid.:253); and Hijaz Kar Kurd, invented in 1855 by Arif Bey (Oztuna 1969:359).

A rather recent example of a newly invented mode from the Arab world is maqam 'Ajam Daud. Named after its creator, the Egyptian singer/composer Daud Husni (1871-1937), the basic scale of this mode is BBb C D Eb F# G A Bb ('Abd al-Halim Nuwayrah, personal communication 12/82). This mode, however, is not widely recognized in the present day.

The modes in circulation in a given period can also increase as a result of the revival of neglected maqamat. Both al-Khula'i and al-Shawwa express this as one of their goals when they include descriptions of "not used" and "neglected" modes in their writings:

> It might be that some of our leading composers [will] refrain from composing in the maqamat Bayyati and Saba out of pity and compassion for these unfortunate/wretched modes and create a few compositions in [those] aesthetic structures [which are not now used in Egypt] instead of their resorting to the invention of a new maqam while even one tenth of the old [modes] are not composed upon. (al-Khula'i 1904:41)

> There are very many neglected modes which are not less significant in terms of aesthetic and artistic value [taraban wa fannan] than some of the rare modes in circulation today. Those who think that they are insignificant next to the circulating modes are wrong. (al-Shawwa 1946:4)

We get a glimpse of the process by which a new or rare mode enters the active repertoire from a comment by al-Khula'i. Maqam 'Ajam 'Ushayran, he writes, was rarely used in Egypt in his day. "There is not composed in it any pieces except that the adept in Egypt know it in transposition. Therefore I have composed a complete suite of pieces in it" (1904:45).

D. Presenting a Small Number of Modes In Order Not to Overwhelm One's Intended Audience

In the present-day period of modern Arab music theory, it became common for theorists and music educators to mention only a small number of modes in response to the fact that they had to introduce the maqam system to a new breed of students, i.e., students in institutionalized settings. For these individuals, maqam lists which present every known and named mode were overwhelming and even demoralizing. The importance of this point is evident from the large number of comments to this effect in the literature. al-Hifni ([1938] 1946:129), for example, writes that "the study of these maqamat with its diverse points is hard to understand and very complicated; so for the sake of simplification for the student we have sufficed in this study to mention [only] the most important and most common of [the modes] ..." al-Hifni proceeds to discuss only twenty-four maqamat.

Writing in 1950, al-Sabbagh comments, "I do not understand what the benefit is from so many [maqam] names except to confuse the mind of the student ... It is one of the shortcomings in Arab music" (*'Īb min 'uyūb al-mūsīqa al-sharqiyyah*) (p.35; al-Hilu quotes this line with minor editing: 1972:84 n.1). In the second *halqah* publication it is reported that the first *halqah* (held in 1957 or 1959) recognized "the necessity of decreasing this large number of maqamat to a number with which their circulation and teaching would be facilitated" (*al-Halqah al-Thaniyah* 1964:7). al-Hilu (1972:74) adds, "The abundance of names makes the study of Arab music and the study of its principles exceedingly difficult. The [many subsidiary modes] which the genius of some systematists have created are not connected with the soul of the art and do not serve [the cause of] Arab music. Perhaps it is because of them that students hesitate and [even] avoid the study and memorization of [Arab music]" (ibid.:74). Thus, although he admits that "the maqamat are many" (p.72), al-Hilu limits his discussion to only thirty-two modes (p.94ff.). Fahmi writes, "Actually, the complexities [involved in trying to determine the exact number of maqamat only] make the student bored/weary without benefiting him" (1965:73). Thus, although he acknowledges that some recognize over 100 different modes, Fahmi analyzes only twenty-seven maqamat in his own work. Hafiz (1971:185) suggests "lowering the formidable number of currently circulating maqamat to a limited [number] of maqamat. This would facilitate their circulation and their teaching in all the music institutes in the Arab countries." As a last example, 'Iffat explains that by incorporating only thirteen different maqamat in his method book for the nāy (the Arab end-blown flute) he has included "only the main maqamat used abundantly in practice in the Arab countries so that [we avoid] that which makes the study difficult for the student" (n.d.:26).

E. Different Ways of Conceptualizing about the Same Musical Phenomena, Resulting in Different Numbers of Maqamat

Theorists from the present-day period of modern Arab music theory have also criticized the manner in which the maqamat were conceptualized and named in previous periods. By failing to take into consideration a number of musicological features that many modes have in common, they claim, earlier musicians and theorists have amassed a bewildering and inappropriately large collection of modes. Were these features taken into consideration, the number of maqamat could be reduced to a more manageable, a more easily graspable level. The most common issues mentioned in such discussions are the manner of treating a) transposed modes, and b) extra-modal elements which enter only temporarily into the performance of a maqam.

1. Independent Names for Transposed Modes?

In the present-day period, theorists have frequently addressed the question, "Should transposed modes be recognized as distinct phenomena, each with its own name, or should the various transpositions of a mode be considered as variations of a single maqam and thus be called by only one name?" The answer to this question is complicated by the fact that both approaches are followed in contemporary practice. The most commonly cited examples of transposed modes which are given new names are transpositions of the modes Huzam and Hijaz Kar. Huzam is based on the note E-b- (E-b- F G Ab B c d e-b-). When based on BB-b-, however, this mode is often called Rahat al-Arwah (BB-b- C D Eb F# G A B-b-). Maqam Hijaz Kar is based on C but also occurs commonly on D and, on occasion, on GG, AA, BB-b-, and F. In these transpositions it is given the following names:

	tonic
maqam Hijaz Kar	C
maqam Shahnaz	D
maqam Shatt 'Araban	GG
maqam Suzdal	AA
maqam Jaharkah Turki	F
maqam Awj Ara	BB-b-

Other commonly noted instances of transpositions receiving independent names include maqam Kurd, based on D, which is called Hijaz Kar Kurd when based on C; maqam Nahawand, based on C, which called Farah Faza when based on GG and Busalik when based on D; and Nawa Athar, based on C, which is called Hisar when based on D. [9]

At the same time, there are many examples in present-day practice where transposed modes are not given independent names. The various transpositions of the maqam Rast, for example, are all called Rast, with the addition of a word or two indicating the new tonic pitch. Thus maqam Rast, based on C, is called "Rast al-Nawa" or "Rast 'ala al-Nawa" (Rast on Nawa) when it is transposed to the note Nawa, i.e., G. When transposed to the note Jaharkah (F), it is called "Rāst al-Jahārkāh" or "Rāst 'alá al-Jahārkāh." The same procedure is followed for the various transpositions of the maqamat Bayyati, Hijaz, and Saba.

From comments by Villoteau and Mashaqah it is clear that both approaches to the naming of transposed modes have existed throughout the modern period. Villoteau reported on the practice which prevailed in Egypt in 1798-1801:

> When one transposes a mode to a degree other than that to which it is [normally] assigned in the musical scale, one distinguishes it by adding to its name that of the degree where one has established its tonic. For example, if one transposes Rast, which is the mode of the first degree, to the third called Sikah, one calls it 'Rast of Sikah' ... (1826:125)

Mashaqah gives an example of the other approach when he describes the mode Nahaft al-Atrak: "Its structure is the structure of Mahur exactly which they transpose to the note Yakah ..." ([c.1840] 189:727-728). That is to say, the maqam Mahur receives a new name when tranposed to Yakah (GG).

The existence of these two approaches presents a problem when one is attempting to compile a comprehensive list of maqamat. Most writers choose to list transposed modes which have distinct names but ignore those modes which are not given independent names. [10] While this approach accurately records the existing independently-named modes, it is highly unsatisfactory from the point of view of documenting performance practice for many of the independently-named transpositions are exceedingly rare while many of the transpositions which lack independent names are among the most frequently played modes (Suzdal, i.e., Hijaz on AA, is an example of the former while Rast and Bayyati transposed to G are examples of the latter).

Combining the goals of presenting a consistent music theory and reducing what they perceive to be an overabundance of maqam names, a number of theorists have suggested discarding all independent names for transposed names. al-Sabbagh, for example, proposed (1950:35), "Why don't we use the European procedure, that is, for example, Do major or Re major or Mi major, etc. Thus we [could] say Sol Hijaz Kar and La Hijaz Kar and Si Hijaz Kar" instead of using the names Shatt 'Araban, Suzdal, and Awj Ara, respectively (al-Hilu paraphrases this passage: 1972:84). In 1961-63, members of the second _halqah_ passed a recommendation to "avoid confining a maqam to a specific tonic so that the name of the maqam would not change with a change in the tonic note" (_al-Halqah_ 1964:14). Similar statements are offered by Salah al-Din (_al-Halqah_ 1964:18), Fahmi (1965:73), and al-Hilu (1972:74). Masha'al explains the reason behind this stance: "We have thought on our part to establish limits to the great number of [maqam] names ... in order that we make the study of the [maqamat] easy and based on scientific principles" (in _al-Tafsir_ n.d.:96).

Fahmi notes,

> Some musicians put forth the argument that maqam Huzam has its own distinct character [_lawn_], while when transposed to the note 'Iraq [BB-b-] and called Rahat al-Arwah it has another character. But this is a weak argument because maqam Bayyati, when transposed to Nawa [G] or Rast [C], presents a different character from Bayyati on Dukah [D] ... but it is not called by a name other than Bayyati. (1965:74).

Fahmi concludes, "It is natural that every maqam which is transposed to a note other than its root note presents a different character" (ibid.), but, following the example of maqam Bayyati, this is not reason enough for independent names.

Of those who claim that the unique character of transposed modes necessitates their independent names, none carry this reasoning through by systematically including the common "unnamed" transpositions in their discussions. Muhammad, for example, describes transposed modes which have distinct names "due to the fact that every note has an affect and vibrations and feelings different from the others" (1984:33). She does not, however, mention Rast Nawa or Bayyati Nawa. al-Hilu rightly notes that to do so systematically would create chaos: "What would be the state of our music if we followed this principle and transposed every maqamat to [each of] the twenty-four quarter-steps...?" (1972:74).

However strongly some theorists have come out against the use of independent names for transposed modes, most still continue to include a number of such names in their own works. Thus, despite arguing that allowing separate names for Huzam and Rahat al-Arwah is something "which reason argues against and logic does not agree with" (Fahmi 1965:78), Fahmi, al-Hilu, and Mash`al all proceed to treat Huzam and Rahat al-Arwah separately in their discussions of the various maqamat. al-Hilu also includes separate discussions of both Kurd and Hijaz Kar Kurd and of the three modes Hijaz Kar, Suzdal, and Awj Ara.

This contradiction points out how deeply the two approaches for dealing with transposed maqamat are embedded in the music culture. Among the reasons for the continued use of separate names, two are mentioned here, the first using Rahat al-Arwah as an example. The name Rahat al-Arwah is not widely known among musicians who lack institutionalized training. For those who have learned the name, it is a symbol of both their training and the richness of their music culture. Concerning the latter point, musicians and theorists who know and use this name are quick to point out its beauty: Rahat al-Arwah means "comfort of the souls." For these individuals, then, both the name and their knowledge of the name is a source of pride. It is understandable, then, that the music theorist might think twice before discarding such a name in the interest of theoretical consistency.

Fahmi, commenting on the fact that he has used both "Nahawand" and "Busalik" to name the same tetrachord, points to another reason why many writers have felt compelled to perpetuate the separate names for transposed modes. "We have done this intentionally ... so that the student becomes completely familiar and comprehensively cognizant of all the intricacies which Arab music encompasses" (1965:78). Thus, as educators they are obliged to inform their readers of those transpositions which are commonly given independent names.

2. Independent Names for Extra-Modal Elements Which Enter Only Temporarily into the Performance of a Mode?

The longer maqam lists are also criticized for restricting the definition of each mode so that any additional feature, no matter how slight or temporary, results in the conceptualization of a new maqam. Yusuf Shawqi comments, "... the biggest obstacle in the way of developing understanding of our music is considering every maqam as having a single and sacred construction. It is not correct to oppose any of its notes being changed, i.e., avoiding the principle of using accidental signs" (al-Halqah 1964:34). In the same publication, members of the second halqah recommend "considering changes which enter into the notes [of a maqam] as accidentals which would not affect the naming of the maqam ..." (1964:14).

al-Sabbagh and al-Hilu expand upon this idea. "... The reason for so many names ... is that they create special names for every little peculiarity in the mode or [every] touch of a note not in the original mode or to the mode itself which they transpose to a degree other than the root one" (al-Sabbagh 1950:34). al-Sabbagh claims that the modes which result from these changes do not have their own individual character and therefore should not be considered as discrete and independent maqamat. al-Hilu adds that many maqamat "resemble each other in their constructions and their melodies and even if a difference is found between them it is very slight ..." (1972:72). "If we examine closely the differences found in some similar modes [*maqamat mutashabihah*] we would not see a great difference which necessitates [their having independent] names" (ibid.:74).

The idea that the definitions of the individual maqamat should be flexible enough to allow for accidentals and other temporary phenomena is, in fact, consistent with the way most musicians conceptualize the individual maqamat. Performers commonly explain a "foreign" element in a given maqam (short of a clear modulation) as "an ornament" (*zakhrafah*), "an embellishment" (*ḥilyah*), "a coloring" (*talwīn*), or "a brief movement" (*ḥarakah*). Rarely will such features result in a renaming of the mode in question. Theorists, on the other hand, will commonly consider the "foreign" element sufficient reason to give the specific piece or passage a new name. The point of greatest divergence between the two approaches concerns changes in a mode's upper tetrachord. Theorists tend to name every unique structure while musicians are, for the most part, content to consider them as variants of a single maqam. The Rast tetrachord on C, for example, can be joined with the following upper tetrachords: Rast, Hijaz, Nahawand, Bayyati, and ʻAjam, all on G; Saba on A; and Hijaz on F. While theorists call the resulting structures Rast, Suznak, Suzdular, Nirz, Mahur, Dalanshin, and Naz, respectively, musicians will usually call them all Rast, perhaps adding a clarification that such and such a tetrachord has been added to the mode. Indeed, of the seven names given here, only Rast and Suznak are commonly known among performers of Arab music. [11]

A comment by Mashaqah shows that the practice of allowing "foreign" elements without renaming the mode has existed throughout the modern period, although he speaks against such a practice. In the section of his work where he describes the various modes, he comes to the mode Zarafkhand and writes,

> This mode, along with the mode which follows and even some others, the masters of music in Egypt in our day do not distinguish from the mode Husayni. This is because of their lack of a thorough acquaintance with this art and because most of their attention is given to the embellishment of the words and the effeminacy of the melody ... Because of this they do not direct their attention to conforming to the basic rules of the art and its branches. (1899:887-888; 1913:96)

Another point of divergence between the narrow and flexible approaches to defining the maqamat concerns what are occasionally referred to as compound modes, i.e., modes that have the features of two or more other modes. While theorists tend to give independent names to these compound phenomena, musicians are usually content to consider them as momentary modulations from the dominant maqam. For example, maqam Zawil is commonly described by theorists as a mode which mixes the features of maqam Rast and maqam Nakriz. Most musicians are not familiar with the name Zawil and thus name such a mode as maqam Rast with moments of maqam Nakriz.

Maqam Dalanshin, mentioned above, might also be considered a compound maqam, but most musicians analyze this not as a separate mode but as maqam Rast with a moment of Saba on A.

While it is natural for theorists to want to name every unique modal structure, the flexible approach adopted by musicians is well grounded in the performance practice, for the Arab modes seldom exist in extended states of modal "purity" (such as is found in Indian classical music). In performance, accidentals and elements from neighboring modes are commonly mixed into the presentation of a given maqam in order to enrich and enhance its features. Musicians have developed an understanding of the boundaries of the individual modes which reflect this aspect of the performance practice. In so doing, they commonly recognize fewer modes than do theorists. [12]

The most extreme stance in favor of a broad definition of the modes was taken by the members of the second halqah when they passed a recommendation in favor of "calling the maqamat by the name of their first tetrachords and considering other changes as accidentals" (al-Halqah 1964:14). Salah al-Din gives an exposition of this idea according to which there would be only eight maqam names, i.e., Rast, Bayyati, Sikah, 'Ajam, Nahawand, Kurd, Saba, and Hijaz (modes with an initial Nawa Athar/Nakriz tetrachord would, according to Salah al-Din, be included within the name Nahawand). Other modes would be considered as being within the family (faṣīlah) of these primary maqamat and would be indicated by the placing of "accidental signs without [the modes] being named by new names" (ibid.:19). In addition, explanatory phrases would be appended to the eight mode names. Maqam Suznak, for example, (C D E-b- F G Ab B c) would be called "Rast whose branch tetrachord is Hijaz, disjunct" (far'uhu Hijaz munfaṣil). Salah al-Din explains,

> Behind this limiting or reduction of the names of our maqamat is not the thwarting/destruction of the modes/colors [alwān] of Arab music but rather the opposite, i.e., the end of the exaggeration and complication and at the same time the concentration and simplification of our maqamat [maqāmātnā wa anghāmnā]. We will not lose a single mode in our heritage ... for these eight maqamat embrace all the [other] modes ... (al-Halqah 1964:19).

Although this recommendation is a logical extension of an already existing tendency among performers of Arab music, it is clearly an extreme proposal. There is no indication that it has attracted any supporters since it was first proposed in 1961-63.

F. Summary: The Number of Maqamat Throughout the Modern Period

As is evident from the above, the maqamat used in Arab music have changed over time. Any attempt to document the ebb and flow in the number of modes used during the modern period is fraught with uncertainty. This is because, even though we have maqam lists from different points in the period (from Villoteau's, based on fieldwork conducted in 1798-1801, to Muhammad's and Surur's, published in 1984 and 1986, respectively), these lists are, by nature, subjective and even arbitrary, for while there is a central group of modes that must appear in every list, there is no clear criteria for accepting or rejecting the numerous peripheral modes. Each writer must adopt his own unique stance regarding how comprehensive a list to present. Nevertheless, we offer the following observations based on the available information.

It seems that at the beginning of the modern period Arab music as practiced in Syria had the largest number of modes. Mashaqah (Damascus, c.1840), apparently trying to present as comprehensive a list as possible, describes ninety-five maqamat. At the same time, Egyptian musicians seem to have used a smaller number of modes. Villoteau and Shihab al-Din (Cairo c.1840), mention only twenty and thirty-four modes, respectively. [13] Syria's large number of modes might be attributed in part to contact between the Syrian and Turkish music cultures of that period.

In the late-nineteenth and early-twentieth centuries an "academic" movement in Egypt brought about a significant increase in the number of maqamat used in that country (see al-Khula'i 1904:41-45; al-Shawwa 1946:4). Many of the "new" modes were imported from Turkey; a few undoubtably came from

Syria. Theorists who document the modes used during this period present lists which include fifty-two (Institute of Oriental Music, Cairo in Kitab Mu'tamar 1933), ninety-five (D'Erlanger in Kitab Mu'tamar 1933), 108 (ninety-four plus fourteen which were "neglected") (al-Shawwa 1946), and 119 modes (D'Erlanger 1949). [14]

In the period after the decline of the "academic" years, i.e., from c.1930 to the present day, it is commonly recognized that the number of maqamat used in mainstream performance declined throughout the region (the historian, Mahmud Kamil, personal communication 6/16/86; and numerous other individuals in present-day Cairo). [15] This can be attributed, in part, to a shift away from scholarly genres like the samā'ī and dawr. It can also be attributed to a popularist orientation within new media-supported segments of the music culture. (Music on records and radio focused on the new film-song genre--from 1932--and on the modern song, the ughniyah.) In response to this move to a smaller number of modes, and also in response to the needs of the new institutionalized contexts in which Arab music and Arab music theory are now taught, many have sought to present short lists which include only the common maqamat. Such lists contain as few as eight (Hafiz 1971:183) or twelve (Racy (1983b:131) and as many as twenty-five ('Ali and 'Arafah 1978:23-25; Fatah Allah and Kamil 1982:13) or thirty-two modes (al-Hilu 1972:93ff.). A larger number of maqamat are, however, still preserved by theorists (Salah al-Din 1950 describes ninety-two maqamat; Muhammad 1984 describes seventy-two) and by some performers (ensembles such as the Firqat al-Mūsīqá al`Arabiyyah in Cairo which perform reportoire from the "academic" period and new compositions by present-day "academic" composers). Significantly, students at Cairo music institutes today are required to know some sixty to seventy or more maqamat for their theory examinations. (They often use Salah al-Din's or Muhammad's works as textbooks.) Thus, while the number of maqamat may have changed from time to time, it seems that the largest number of known maqamat has remained in the range of seventy to 100 modes throughout the modern period. Only two lists have exceeded this number (D'Erlanger's 1949 list of 119, and al-Shawwa's 1946 list of 108). [16]

NOTES FOR CHAPTER VIII

1. The modes presented by Mashaqah bear little resemblence to those in D'Erlanger's report; thus, their arriving at the same number of modes appears to be but a coincidence. However, Hashim Bey, writing in 1862, also presents ninety-five modes.

While it seems that Mashaqah was attempting a comprehensive list of all known modesi, it is somewhat surprising that he gives forty-one modes based on the note Dukah (D) but only nine based on Rast (C). In the present day, the total number of C- and D-based modes does not differ substantially. Thus we might question whether Mashaqah's presentation accurately reflected the practice of his day or whether he just decided to be more thorough when he came to the D-based modes.

2. There are a few specific compositional genres in the repertoire of these "academic" musicians which play an important role in preserving a number of the rarer maqamat. Primary among these are the *bashraf* (pl. *bashārif*) and *samā'i* (pl. *samā'iyyāt*) which are known for their academic character. Thus, there are a number of maqamat which remain in the active repertoire of this group of musicians primarily because of a few *samā'iyyāt* and *bashārif* which are composed in these modes (for example, the maqamat Shatt 'Araban, Sultani Yakah, Bayyati 'Araban, and Hijaz Humayun). Other genres which have also played a role in this regard are the *muwashshah* and *dawr*. These four genres were most popular in the late- nineteenth and early-twentieth centuries. The *samā'ī*, *bashraf*, and *dawr* genres are not used in the present-day popular music.

3. Mashaqah also mentions two other modes, Rahat al-Arwah Rumi and al-Ma'uranna' al-Rumi (ibid.,729 and 389) whose names suggest either Anatolian or Greek origins. Smith (1847:186 and 191) and Ronzevalle (1913:35 and 47) translate "Rumi" as "Greek."

4. 'Ali Darwish was the main informant for D'Erlanger's two presentations of the Arab maqamat, i.e., his report in the 1932 Congress publications (*Kitab Mut'amar* 1933 and *Recueil* 1934) and his 1949 work. 'Ali Darwish's training in Istanbul raises the question of the extent to which Arab and Turkish musics were considered discrete phenomena by 'Ali Darwish, D'Erlanger, and others. Were D'Erlanger's maqam lists representing Arab music (as he claimed) or a combination of Arab and Turkish musics? It is understood that Arab musicians were ready to accept Turkish modes, but could one include all the Turkish modes in a list of the Arab modes? If not, then when exactly does a Turkish mode become an Arab mode? Unfortunately, there is no clear-cut answer to this

question for criteria such as that the mode must be "sufficiently recognized" in the Arab world are subjective in nature.

It is interesting in this regard to note that al-Hilu labels the thirty-two modes he describes as "the well-known and most used in all of the Arab and Turkish countries" (1972:94).

5. This is not to imply that the Turkish and present-day Arab definitions of these modes are the same. On the contrary, the present-day Arab definitions are generally highly simplified versions of the Turkish definitions. The simplification of the Arab concept of mode in the present-day period of modern Arab music theory is discussed below in Chapter X.

6. Further study is needed on the role of other regions in the Middle East as sources for new modes, especially `Iraq and Iran.

7. In addition, the mode Bayyati al-Husayni (ibid.:884) was commonly called Bayyati by Syrians but Nayriz [sp?] by Egyptians (Mashaqah [c.1840] 1899:884). Mashaqah also condemns the fact that the Egyptians do not differentiate among a number of distinct modes, calling them all by the name Husayni (ibid.:887).

8. It is likely that most, if not all, of the modes used in Syria which were not found in Egypt were themselves recently brought to Syria from Turkey (see discussion below of the invention of new modes in Turkey in the late-eighteenth and early-nineteenth centuries). That many Turkish modes first entered Syria before they reached into Egypt is evident from al-Khula`i's statement that al-Hamuli learned the modes Nahawand, Hijaz Kar, and `Ajam from Turkish practice and then introduced them for the first time into Egyptian music. While the historian, Mahmud Kamil, dates this as having taken place c.1880-1885 (personal communication 6/16/86), Mashaqah indicates that these same modes already existed in Syrian practice in the early nineteenth century ([c.1840] 1899:730,930, and 932). (Mashaqah's Nahawand [spelled Nahawind] was not the modern-day mode, however, as it was based on G rather than C as is the case in the present day.)

In his presentation of the maqamat, al-Khula`i describes a number of modes (at least thirteen) which he says were not as yet used in Egypt. While al-Khula`i does not state where he came across these "new" modes, it is possible that he learned them from Syrian practice, since it is said of al-Khula`i that he

> met one of the Syrian masters of music, the
> Shaykh Ahmad Abu Khalil al-Qabbani of Damascus

> ... Abu Khalil al-Qabbani suggested to Kamil al-Khula`i that he travel with him to Syria. [al-Khula`i] agreed and traveled with him to Damascus in the year 1897 and then undertook a trip with him to Istanbul, Baghdad, and Mosul [in northern Iraq] for a period of three years during which [al-Khula`i] developed scientically, culturally, and artistically. (Kamil 1975:96)

Kamil adds that al-Khula`i is noted for having "left a vast wealth of *muwashshaḥāt* which are distinguished by [among other things] a ... multitude of maqamat" (ibid.:97).

9. The following is a comprehensive list of the transpositions which are given independent names in the present-day Arabic-language theory books used for the present study (root positions are given in parentheses):

Hijar Kar (C) = Shahnaz (D) = Shatt `Araban (GG) = Suzdal (AA) = Awij Ara (BB-b-) = Jaharkah Turki (F)

Kurd (D) = Hijaz Kar Kurd (C)
Kurd (D) = Lami (E) (Surur 1986:140)

Farahfaza (GG) = Nahawand Kurdi (C)(*i.e.*, with a Kurd tetrachord on G) (Surur 1986:154)
Sultani Yakah (GG) = Nahawand (C)(with a Hijaz tetrachord on G) (al-Sabbagh 1950:43; Surur 1986:157)
Busalik (D) = Nahawand (C) (al-Sabbagh 1950:44)

Hisar (D) = Nawa Athar (C) (al-Sabbagh 1950:44)

Huzam (E-b-) = Rahat al-Arwah (BB-b-)
Sikah (E-b-) = Farahnak (BB-b-) (Salah al-Din c.1950:74; al-Sabbagh 1950:53)
Awij (BB-b-) = Sha`ar (E-b-) (Salah al-Din c.1950: 72)

Nishaburk (D) = Rast (C) (al-Sabbagh 1950:41) but Salah al-Din (1964:22) and Surur 1986:130 say Nishaburk (D) = Nirz Rast (C)
Yakah (GG) = Nirz Rast (C) (Salah al-Din 1964:22)

Bayyati (D) = Bayyati `Ushayran (AA) (al-Sabbagh 1950:48)
Bayyatayn (D) = Husayni `Ushayran (AA) (Salah al-Din c.1950:68)

In the middle period of modern Arab theory, most of these modes were not considered exact transpositions of one another. Rather, each mode was understood to have unique characteristics, often concerning the order in which the mode's various features were supposed to be revealed in performance (see Section J of Chapter X, below). In the present day, however, these modes are commonly understood to be exact transpositions of one another.

10. There are a few exceptions: Farah lists Rast Nawa and Bayyati Nawa (1974:83); Salah al-Din lists Hijaz Nawa (c.1950:66-67); Bulos includes Rast Nawa (1971:10).

11. An example of the tendency to allow for changes in a mode's upper tetrachord without changing the name of the maqam concerns a somewhat common composition in the instrumental genre called tahmīlah. Although clearly in maqam Suznak (C D E-b- F G Ab B c)--the first note of the piece is Ab--the piece is often called by the name "Tahmilah Rast" rather than the more 'accurate' name, "Tahmilah Suznak."

12. It is interesting to note that the tendency among theorists to individually name every "little peculiarity" and the names that they have come up with are both often met with scorn by musicians. A number of musicians have reacted this way to the existence of the name Rahat al-Arwah, for example. Others object to separate names for "Dalanshin and other similarly obscure modes." But while musicians object to these names, they highly value the musical phenomena that these names refer to. The idea of playing a moment of Saba on A within a presentation of Rast on C (i.e., maqam Dalanshin) is, for most musicians, an important part of the genius of Arab music. The adverse reaction is due to the fact that the names Rahat al-Arwah and Dalanshin are not commonly used by musicians and therefore lack an important level of legitimacy. These names exist only in the realm of music theory and are therefore objects of scorn.

13. Admittedly, Villoteau and Shihab al-Din seem content to mention only the more common modes, thus a direct comparison with Mashaqah's list might be inappropriate. Villoteau lists seventeen modes with comments that three are given different names when the same structure appears an octave higher (1826:128-130). Shihab al-Din does not list the modes per se. Rather he presents a collection of song texts with the maqamat indicated for each song. The number thirty-four is arrived at by totaling the number of modes indicated (thirty-one), then adding three modes mentioned only in his introductory pages (1892:16 and 21).

14. There is some evidence which suggests that Egyptian musicians continued to use less maqamat than their Syrian counterparts, even during Egypt's "academic" period: While D'Erlanger and 'Ali Darwish compiled lists of ninety-five and 119 modes (D'Erlanger 1933 and 1949), a 1932 Congress committee decided that only fifty-two modes were used in Egypt at that time (Recueil 1934:134). In addition, the

second halqah came up with only fifty-three modes which were "in current use in Egypt" in 1961-63 (al-Halqah 1964:11 and 12). This evidence is contradicted, however, by lists provided by Salah al-Din and al-Shawwa. Salah al-Din, an Egyptian theorist, describes ninety-two modes in a 1950 work. al-Shawwa's 1946 work includes 108 modes. Although al-Shawwa was born in Aleppo in 1887, he moved to Cairo in 1904 and lived there until his death in c.1960. al-Shawwa was widely recognized as one of the greatest Arab violinists of his day. As he spent his adult years in Cairo, it would be inappropriate to dismiss his list of modes as a Syrian list. I would argue that the number of modes known to Syrian and Egyptian musicians evened out by the end of the "academic" period, that the different sized lists represent differences in intent rather than differences in performance traditions; i.e., D'Erlanger, al-Shawwa, and Salah al-Din were able to collect large numbers of modes because they were willing to include many rare maqamat which others (including the 1932 Congress Committee and the second halqah) considered too rare to mention.

15. Statistical evidence verifying this decline has yet to be compiled. Tentative support can be gleaned from documentation provided by al-Masri and Kamil (1979) on the recordings made by the Egyptian singer Umm Kulthum. al-Masri and Kamil list 286 songs which Umm Kulthum recorded between 1924 and 1973. For each song they provide, to the best of their knowledge, a date and a maqam. While al-Masri and Kamil's information is incomplete and incorrect in a number of cases, analysis of the maqamat and dates indicated provides, if not conclusive, then at least preliminary, data on changes in the number of modes used over a nearly fifty-year period. In all, 223 songs are labeled as to maqam and date. For these 223 songs, twenty-five maqamat are indicated. (Only the dominant mode is given for each song; modes which appear within each song as a result of modulation are not considered.) The following table analyzes which maqamat were used over three two-decade periods:

	Rast	Bayyati	Huzam	Nahawand	Kurd	Hijaz Kar	Hijaz
1920-30	21	20	10	11	8	9	6
1940-50	20	9	11	10	7	2	4
1960-70	7	4	8	4	5	1	1

	Saba	HijazKarKurd	`Ajam	Jaharkah	Shuri	Mahur	`Iraq
1920-30	4	6	3	2	4	4	2
1940-50	3	-	1	1	1	-	-
1960-70	1	-	1	3	-	-	-

	Nakriz	`Ajam`Ushayran	AtharKurd	`Ushaq	Suznak
1920-30	1	2	1	1	-
1940-50	-	-	-	-	1
1960-70	-	-	-	-	-

	TarzJadid	Shahnaz	Kirdan	Zingaran	NawaAthar	Rahat al-Arwah
1920-30	1	1	1	1	1	1
1940-50	-	-	-	-	-	-
1960-70	-	-	-	-	-	-

TOTAL

1920-30s 118 songs were set in 24 maqamat.
1940-50s 70 " " " " 12 " .
1960-70s 35 " " " " 10 " .
223 " for which maqam and date are indicated.

Thus, twenty-four modes were used in the 1920-30s, twelve in the 1940-50s, and only ten in the 1960-70s. While the number of songs also dropped considerably, thus tempering the weight of the results regarding the use of the maqamat, still the drop in the number of maqamat is significant and in accordance with the common understanding that fewer maqamat have been used since the 1930s.

16. While the largest numbers of known modes have remained rather constant throughout the modern period, the definition of what constitutes a mode has changed drastically over the same time span. This is discussed at length in Chapter X.

CHAPTER IX: CLASSIFYING THE MAQAMAT

A. Introduction

Since the beginning of the modern period the most common way of classifying the maqamat has been to list them by tonic pitch, usually in ascending order. Throughout the period theorists have collectively recognized at least fifteen different notes which can serve as tonic pitches. In the present-day, though, most acknowledge only eight, i.e., GG, AA, BBb, BB-b-, C, D, E-b- and F. According to this system all the maqamat whose tonics are GG are listed together first, then all those whose tonics are AA, then BBb, etc. Thus, one can speak of "the GG modes" or "the GG-based" modes, "the AA modes," "the BBb modes," etc. Although this system is criticized for ignoring structural relationships which exist among the maqamat (see al-Faruqi 1974:94), its importance lies in showing where the modes occur in the overall gamut and also in serving as a basis for the codification of modulatory practices. (Present-day musicians, for example, often acknowledge that when playing a D maqam you can modulate to any other D-based maqam, but not to a C-based maqam; see Chapter XI for a discussion of modulatory patterns.)

After the revival of tetrachordal theory in the twentieth century, theorists developed a new system for classifying the maqamat. Believing that the character of a mode is determined primarily by the mode's lower tetrachord, theorists began to group the maqamat by this feature. According to this approach there are as many groups of maqamat as there are unique structures of lower tetrachords. Most commonly, theorists have recognized nine or eleven such groups, called *faṣā'il* (s. *faṣīlah*). For example, all the modes which have an initial Rast tetrachord are grouped together to form the Rast *faṣīlah*, regardless of whether their tonic pitch is C or GG or any other note. This method of classification is now widespread.

The adoption of Western staff notation eventually led to a third system of classification based on the key signatures needed for transcription. It has been most common to recognize four distinct key signatures (*adillah*; s. *dalīl*) and thus four groups of modes. Dubbed a "scalar approach" to classification by one of its key advocates (Shawqi 1964:33ff.), this method is unique for grouping together modes which share the same notes but which differ concerning the note which functions as the tonic. For example, the modes 'Iraq, Rast, Husayni, and Sikah are grouped together because they all share the notes BB-b- C D E-b- F G A B-b- c d e-b-... and thus share the same key signature, i.e., B-b- and E-b-. They differ in that 'Iraq's tonic is BB-b-, Rast's is C, Husayni's D, and Sikah's E-b-. [1] Neither the tonic-pitch nor the *fasīlah* systems recognize this type of relationship among the modes.

The tonic pitch, _faṣīlah_, and key-signature systems are the main present-day approaches to the classification of the maqamat. Apart from these, some classify the modes based on the kind of intervals contained in each mode. Most commonly, this approach recognizes two groups of modes; i.e., those with three-quarter-step intervals, often called the "Arab" or "Eastern" modes, and those free from such intervals. The latter, it is noted, can be played on Western musical instruments. In addition, music educators have tried to rank the maqamat according to the amount of difficulty each mode is thought to present to the student; Mashaqah mentions four ways that the maqamat were thought to differ from each other in his day; and there are a number of isolated terms or adjectives which point to different categories of maqamat but which are not part of any comprehensive system of classification ("common" versus "rare" modes, modes which "can't stand on their own," "root" versus "transposed" modes, "compound" modes, etc.). These and other classificatory concepts will be discussed in turn.

B. The Three Main Classification Systems

1. Classifying the Maqamat by Tonic Pitch

In the modern period, the most prominent way of classifying the maqamat has been to list them by tonic pitch. This is the method used by Mashaqah in the period's first major presentation of the modes (c.1840): "... I have grouped the modes which have their tonic [qarār] on one and the same note [burj] into a single section without regard to the [structural] relationship of the modes to each other. Thus, I have divided this chapter into eleven general sections" (1899:726). His eleven sections give those modes whose tonics are, first, GG (four in number), then AA (3), BB-b- (8), C (9), D (41), E-b- (12), F (3), G (5), A (1), B-b- (6), and c (3). [2]

While eleven groups of modes are presented, in fact, thirteen (and possibly fourteen) different tonic pitches are indicated. The reason for this discrepancy seems to be twofold. First, Mashaqah acknowledges that he presents only eleven groups of modes, in part, as a matter of convenience. For example, when presenting the first mode which deviates from his eleven groups, Mashaqah comments:

> Zirkulah, it is among the modes which have their tonic on one of the arbā' [the non-fundamental degrees]. I have deemed it appropriate to place each of these with the modes which belong to the [arbā''s] neighboring fundamental note because they [modes based on non-fundamental degrees] are scant in number. By doing so I am spared from making special sections for introducing them. (ibid.:890)

Zirkulah is described as having C# as tonic (the note C# is called Zirkulah), but is placed with the D-based modes. [3] Following the same reasoning, Mashaqah places the mode 'Ajam, whose tonic is given as Bb, within his group of B-b- maqamat: "... we have mentioned it here because the quarter-note Bb [rub' al-'Ajam] is a part of the fundamental note B-b- [burj al-'Iraq]" (ibid.:932), i.e., Bb falls within the three-quarter step interval between the notes A and B-b-. Although Mashaqah does not explicitly recognize any other examples of maqamat resting on non-fundamental degrees, he describes the mode Nahawand Saghir as ending on F# (the note called Hijaz) (ibid.:930). This mode is placed with the G-based modes.

The disrepancy between the number of tonic pitches and the number of maqam groups is also attributable, it seems, to a bias Mashaqah has in favor of the fundamental notes. Mashaqah seems to feel that only the fundamental notes should serve as tonic pitches. Thus, his eleven categories of modes represent the first eleven fundamental notes, starting with GG and ending with c. This bias is discussed again below (Section C.3), but it should be noted here that such a bias is well based in the performance practice that Mashaqah describes since ninety-two of the ninety-five modes Mashaqah discusses end on one of the eleven fundamental notes. Taking into consideration Zirkulah (C#), 'Ajam (Bb), and possibly Nahawand Saghir (F#), the number of recognized tonics in

Mashaqah's work increases to thirteen or fourteen. [4]

Despite these discrepancies, Mashaqah's classification of the modes appears to be well thought out and not at all haphazard for he begins each group by stating the number of modes that it contains, for example, "the modes [alhān] whose tonic [qarār] is GG [al-Yakah] are four" (1899:727) and "the modes whose tonic is AA [al-'Ushayran] are three" (1899:728).

al-Khula'i (1904:41ff.) also classifies the maqamat by tonic pitch, but begins with the C-based modes (c.13), then the D modes (6), then E-b- (2), F (2), GG (2), AA and A (3), BBb and Bb (3), and lastly, the BB-b- modes (6). (A number of modes are mentioned only in relation to other modes and are not listed by tonic note.) Comparing these categories to those of Mashaqah, we find that there are now only ten groups of modes: al-Khula'i includes no G, B-b-, or c modes; the presence of modes based on BBb is a new development; and significantly, al-Khula'i offers no apology for the BBb or Bb modes, suggesting that the aesthetic that modes should be based only on fundamental scale degrees has disappeared. [5] The new understanding is later expressed by al-Shawwa (1946:96) when he writes that the modes must end on either one of the fundamental notes or one of the ansaf (the second category of notes discussed in Chapter II above).

The 1932 Congress continued the practice of organizing the maqamat by tonic pitch but in the two maqam lists included in the Congress publication (one by D'Erlanger, the other by the Institute of Oriental Music, Cairo) the number of tonic pitches is reduced further to just eight. These are GG, AA, BBb, BB-b-, C, D, E-b-, and F. The notes G and above have all been dropped while the BBb position continued to be used (four BBb-based modes are mentioned). These eight pitches subsequently became the standard for later tonic-pitch classifications (see al-Shawwa 1946; al-Halqah 1964:12; Fahmi 1965; Qasis n.d.:195ff.; al-Hilu 1972; Kamil 1975; 'Arafah and 'Ali 1978).

A few post-Congress theorists have recognized more or less than the "standard" eight tonic pitches in their tonic-pitch classifications. In his 1949 publication, D'Erlanger includes a ninth note. E natural, for which he gives two rare modes, Nishabur and Shi'ar (p.320-322). [6] Salah al-Din (1950:195) continues to recognize the note G (Nawa) as a tonic pitch and thus includes nine groups (the standard eight plus G). There is also a tendency in the present day to discuss only four groups of modes; i.e., those based on C, D, E-b-, and BBb since these are considered to contain the most common modes (see, for example, Khamis 'Ali, in Spector 1970:251).

The decrease in the number of recognized tonic pitches (from Mashaqah and al-Khula'i to the 1932 Congress and later works) can be attributed to at least three factors, i.e., a change in the performance practice, a tendency among musicians in the present day to consider many rare modes based on little-used tonic pitches as but transpositions of more common modes, and a desire among present-day theorists and music educators to simplify and consolidate Arab music theory. The clearest examples of change in the performance practice concern the modes which early theorists presented as being based on G, A, B-b-, and c. A number of Mashaqah's B-b- and c modes have simply disappeared from practice: Pahalan, Awj Darah, Awj Hisar, and Awj Khurasan (all based on B-b-), and Kardani Ghazali and Ramal Tuti (based on c) are not mentioned again by any other modern-period writer. Other modes have since shifted their tonic pitch: among Mashaqah's G-based modes, Nahawand and Rahawi are now considered to be based on C while the rare mode Nishabur is now given on E or D (Salah al-Din c.1950:100). Similarly, Husayni (or Mashaqah's al-Husayni al-Masri), the only A-based mode mentioned in the modern period, is now understood to be based on D. [7]

Those who mention only four groups of maqamat (those based on C, D, E-b-, and BBb) do so, in part, because the modes based on GG, AA, BB-b-, and F are rarely played in the present day. Many of the GG, AA, and BB-b- modes were popular in the "academic" period of the late-nineteenth and early-twentieth centuries but lost favor in subsequent decades.

A four-fold grouping of the maqamat is also encouraged by a tendency among many present-day musicians to consider the GG, AA, BB-b-, and F modes as but transpositions of one or another of the C, D, E-b-, or BBb modes. For example, Shatt 'Araban and Fara Faza, based on GG, are commonly considered as but transpositions of two C-based modes (Hijaz Kar and Nahawand, respectively). Similarly, Rahat al-Arwah, based on BB-b-, is considered as but a transposition of Huzam, an E-b- mode.

The loss of at least three tonic-pitch categories can also be attributed to a desire among modern-day theorists and music educators to consolidate Arab music theory. For example, the maqamat Mahur, Awj, and 'Ajam were considered in the past to be based on c, B-b-, and Bb, respectively (see Mashaqah [c.1840] 1899:931-932). However, in the twentieth century it has been common to consider these modes as based in the lower octave, i.e., on C, BB-b-, and BBb, respectively (this despite the fact that many continue to recognize that these modes are based more prominently in the higher rather than the lower octave). This shift has allowed theorists to omit mention of the c, B-b-, and Bb categories of modes.

While most present their tonic-pitch classifications without the use of any specific terminology ('Arafah and 'Ali, for example, label each group simply, "the maqamat based on Rast [C]," "the maqamat based on Dukah [D]," etc.; 1976:23-25), a few writers do use special terms. On two occasions, Mashaqah refers to the modes in each group as "branches" or "derivatives" (furū‘; s. far‘) of the tonic pitch (ibid.:731 and 889). Acknowledging a Western influence, Fahmi refers to the modes of each group as "relatives" (aqārib) (1965:76). al-Shawwa calls each tonic-pitch group of modes a "family" (faṣīlah) (1946:98). Later theorists, however, use the terms faṣīlah and furū‘ for referring to tetrachord-based classification systems.

2. Tetrachord-Based Classification Systems

The Organizing Committee of the 1932 Congress called for a new system of classification when it asked the Committee on the Modes, Rhythms and Composition to analyze the maqamat in terms of "genres" (i.e., tetrachords) "for classifying them afterwards according to the genre[s] which form [each mode's] fundamental scale" (Recueil 1934:82; see Chapter VI.B for a discussion of the role the 1932 Congress played in the revival of tetrachordal theory in the twentieth century). In the Congress publication itself the new classification system did not receive a separate presentation but was incorporated within D'Erlanger's report of ninety-five maqamat organized by tonic pitch. For each mode D'Erlanger indicates the faṣīlah (pl. faṣā'il, i.e., family or genus) to which that maqam belongs. This feature is not discussed in the publication nor is the term *faṣīlah* explained at any point; however, it is clear that D'Erlanger has classified the maqamat according to their lower tetrachord. For example, when presenting the D-based modes he first gives those which have an initial Bayyati tetrachord, labeling each as being "from the Bayyati *faṣīlah*"; then he gives those modes which have an initial Hijaz tetrachord, calling them "from the Hijaz *faṣīlah*"; etc. (*Kitab Mu'tamar* 1933:264ff.). [8]

Among the sources for the present study, the *faṣīlah* system is first explained by Salah al-Din:

> Maqamat are from one and the same *faṣīlah* if they are identical in the root or trunk tetrachord [*jins al-rukūz* (*al-jidh'*)] even if [they differ in their] branch tetrachord [*jins al-far'*]. (1950:104).
>
> In order to know the *faṣīlah* of a maqam which one is asked to analyze, one needs to know the name of its trunk [lower] tetrachord [*jins al-jidh'*]. [This knowledge is obtained] by examining this tetrachord (which begins from its first degree until its fourth) and if its intervals correspond to the intervals of one of the principal tetrachords ... then you know the name of the trunk tetrachord and you know its *faṣīlah* - if the intervals of the trunk tetrachord correspond to the intervals of the Huzam tetrachord, for example, then the maqam is from the Huzam *faṣīlah* and if they correspond to the Bayyati tetrachord then the maqam is from the Bayyati *faṣīlah* and so on. (ibid.:198)

The conference held in Cairo from 1961-1963 also used this system of classification:

> In pursuit of the principles of simplification and facilitation of transcription, it is possible to divide the maqamat ... into *faṣā'il* based on the principal trunk tetrachord [*jins al-jidh' al-asāsī*], regardless of what enters into the

> branch tetrachord [*jins al-farʿ*] in terms of chromaticisms or accidentals [*talwīn aw taghyīr ʿāriḍ*]. (*al-Halqah* 1964:12)

The *fasīlah* system is now common in the Middle East, appearing in a number of theoretical works and forming part of the required curriculum at the main Cairo institutes of music (see, for example, al-Sabbagh 1950:41ff.; al-Hilu 1972:94ff.; Kamil 1975:49ff.; Qasis n.d.:192ff.; Fakhuri n.d.:56ff.; Jabaqji 1983:11; Muhammad 1984:33ff.; Surur 1986:120ff.).

a. The Primacy of the Lower Tetrachord as Justification for the Fasilah Concept

The *fasīlah* concept is supported by a widespread belief in the present-day period that the lower tetrachord plays the dominant role in determining the character of a mode. (This was not necessarily true for the modes of the early and middle periods; see Chapter X, Sections D and J.) al-Hilu, for example, writes,

> The Arabs have called the lower tetrachord "*al-jins al-mustaqīm*" [i.e., the upright/proper/honorable tetrachord] because of its innate position in the maqam and because it is considered the resting place for the mode [*lahn*] which is distinguished by it from other modes and ... because it shows the color [*lawn*] of the mode and its character ..." (1972:92) [9]

The common present-day term for the lower tetrachord, *jins al-aṣl*, i.e., the root/fundamental tetrachord, supports the idea that a mode's lower tetrachord is considered the mode's predominant tetrachord.

The dominant position of the lower tetrachord in the present-day theory is further supported by what Racy calls the "unstable" nature of the upper tetrachord in practice (personal communication 6/86). When composing or improvising in a given maqam, composers and musicians commonly introduce two or three different tetrachordal structures and often a characteristic accidental in the region of the upper tetrachord. So long as the lower tetrachord is retained musicians will commonly consider such elements to be embellishments upon the maqam being played; i.e., the upper tetrachord can change without musicians renaming the mode (see Chapter VIII, Section E.2). A change in the lower tetrachord, however, would readily be considered a modulation. It is perhaps in recognition of this situation that the lower tetrachord has, according to al-Hilu, been called "'the sacred/inviolable zone' of the maqam [*al-minṭaqah al-ghalīẓah*]" (1972:85). [10]

b. How Many Fasa'il Are There?

With the development of the perception that there are either nine or eleven principal tetrachords (see Chapter VI above), it became common to recognize nine or eleven *faṣā'il*, i.e., one for each tetrachord. The eleven *faṣā'il* are first presented by Salah al-Din (1950:196) and are later adopted by the second *ḥalqah* (1964:13)(see chart on p.388 below).

Muhammad (1984:34ff.) and Shurah (1983) adopt the stance that there are only nine *faṣā'il*. (Shurah uses the term *‘ā'ilah*, literally "family," rather than *faṣīlah*; see his p.107.) In the present day at the Cairo music institutes, students are taught both approaches, with particular teachers favoring one or the other of the two. [11]

It is equally common, however, for theorists to present a different number of *faṣā'il*, i.e., neither nine nor eleven. Other numbers result from one of three factors: the consolidation of two *faṣā'il* into one; allowing "duplicates," i.e., two or more *faṣā'il* based on the same tetrachordal structure; and allowing rare *faṣā'il* based on seldom-used tetrachords. The most common example of consolidation occurs when "the three Sikah tetrachords(4)" (Sikah, Huzam, and ‘Iraq) are grouped into a single trichord-based *faṣīlah*; this explains the difference between the "standard" nine and eleven *faṣā'il*. The practice of consolidation also occurs with respect to the Saba and Nawa Athar *faṣā'il* which are incorporated by some into the Bayyati and Nahawand *faṣā'il*, respectively. In such cases, tetrachordal structure, which is normally the deciding factor for determining *faṣīlah* affiliation, is disregarded in favor of some other principle. In the *ḥalqah* publication, Salah al-Din introduces the principles of transcription as a factor when he proposes recognizing only eight *faṣā'il*, i.e., the standard nine minus Nawa Athar: "The inclusion of [Nawa Athar] within the

Nahawand [*faṣīlah*] is possible since their key signatures are the same and all of their notes agree except for the fourth degree (fa *dīyaz* [i.e., F#]), and the upper tetrachord [*far`*] of each of them is Hijaz..." (*al-Halqah* 1964:18). [12] Fakhuri (n.d.:56ff.) adopts this same eight-fold classification.

maqam Nahawand:	C	D	Eb	F		G	Ab	B	c
maqam Nawa Athar:	C	D	Eb		F#	G	Ab	B	c
						¦*Hijaz tetra*¦			

Touma (1977:41-49) also recognizes only eight families of modes (he calls these "genres" instead of *faṣā'il*), but here the "missing" group is the Saba *faṣīlah* which is incorporated within the Bayyati "genre." Although Touma does not explain this grouping, it does correspond to a common perception among many musicians and theorists in the Middle East that Saba and Bayyati are closely related maqamat. For example, in discussions of the exact intonation of the note E-b-, musicians and theorists usually state that the two modes share the same E-b-. The two modes are also commonly grouped under the same Bb/E-b- key signature.

In his presentation of the maqamat, al-Hitami (1983) incorporates both these ideas; i.e., the Nawa Athar *faṣīlah* is included within the Nahawand *faṣīlah*, and the Saba *faṣīlah* is given within the Bayyati *faṣīlah*. Thus, al-Hitami recognizes only seven *faṣā'il*.

One of the two ways that the number of *faṣā'il* can exceed eleven is by allowing "duplicates." For example, some recognize separate Nahawand and Busalik fașā'il even though both share the same 1 2 3b 4 structure for their initial (lower) tetrachord. Some also include separate 'Ajam and Jaharkah fașā'il though both have the same 1 2 3 4 structure for their initial tetrachord. D'Erlanger (1933), Kamil (1975:49ff.), and Qasis (n.d.:192ff.) include both these duplicates. Others include separate Hijaz and Hijaz Kar fașā'il, both based on a tetrachord with a 1 2b 3 4 structure (see al-Hifnī 1946:198; and Kamil 1975:49ff.). Still others recognize separate Nawa Athar, Nakriz, and Hisar fașā'il; all three share the same initial pentachordal structure, 1 2 3b 4# 5 (see al-Hilu 1972). These duplicate fașā'il result from a somewhat common tradition whereby the same tetrachordal structure is called by different names depending on where it occurs in the overall gamut. For example, the tetrachord (1 2 3b 4) is called Nahawand when based on C but is often called Busalik when based on D (this is discussed above in Chapter VI). [13]

The number of fașā'il is also augmented if one admits separate groups for maqamat which have rare initial tetrachords. For example, D'Erlanger (1933:321), Qasis (n.d.:209), and Kamil (1975:68) include a separate Musta'ar fașīlah for maqam Musta'ar (E-b- F# G ...). Similarly, D'Erlanger includes a separate Sazkar fașīlah for maqam Sazkar, commonly said to begin with a C D# E-b- F tetrachord (1933:246). al-Hilu (1972:88) adds that there are a number of rare modes that do not belong to any of the main *fasa'il* because of the unique constructions of their lower tetrachord. [14]

It is more common, however, for theorists to include rare maqamat in the closest possible *faṣīlah*. This approach was officially adopted by the members of the second *ḥalqah* when they accepted the recommendation "to consider changes which enter into the notes [of the various maqamat] as accidentals [*ṭāri'atan*] which do not affect the naming of the maqam or its *faṣīlah*" (*al-Halqah* 1964:14). Following this procedure maqam Musta`ar is included in the Sikah *faṣīlah* (Salah al-Din 1950:196; al-Sabbagh 1950:51; Touma 1977:43; Muhammad 1984:53). Sazkar is included in the Rast *faṣīlah* (Salah al-Din ibid.; al-Sabbagh ibid.:42; Muhammad ibid.:37). Saba Busalik (D E F Gb A ...) and Saba Zamzamah (D Eb F Gb A ...) are given within the Saba *faṣīlah* (Salah al-Din ibid.; al-Sabbagh ibid.:49; Muhammad ibid.:51). And Awj Ara (BB-b- C D# E-b- ...) is given within the `Iraq or Sikah *faṣīlah* (D'Erlanger 1933:222). [15]

c. *The Fasilah System as a Way of Isolating the Main, the Most Common Maqamat*

While many use the *faṣīlah* system simply as a way to point out similarities of structure and character among the maqamat (for example, D'Erlanger 1933, al-Hilu 1972, Kamil 1975), others use this method of classification as a way to isolate the most common modes from the large number of existing modal structures. For these latter theorists, the *faṣīlah* system corrects one of the major shortcomings of the classification by tonic pitch, namely the implication that all maqamat are equal in status and function. [16] The first to use the *faṣīlah* system in this manner was al-Sabbagh. He isolates ten modes which he calls "the principal modes" (*al-anghām al-aṣliyyah*) of Arab music (1950:34ff.). With but one exception each of these ten modes heads a separate *faṣīlah* which contains anywhere from two to twenty other modes (al-Sabbagh's classification of the modes is discussed further below). In similar fashion, Salah al-Din (in *al-Halqah* 1964:19ff.), Jabaqji (1976:51; Jabaqji copies this page from Salah al-Din's work), and Muhammad (1984:34ff.) isolate a parent mode for each *faṣīlah*, and call these parent modes "the fundamental maqamat" (*al-maqāmāt al-asāsiyyah*) of Arab music (Salah al-Din ibid.:21-22; Jabaqji ibid.; Muhammad ibid.:21; see also *al-Halqah* 1964:14). Muhammad refers to these modes individually as "the basis/foundation of the *fasilah*" (*asās al-faṣīlah*) (1984:34ff.).

Salah al-Din and Jabaqji recognize eight fundamental modes; Muhammad recognizes nine; the *halqah* recognizes eleven. In each case, the fundamental modes are those which share the same names as the tetrachords which unify each *faṣīlah*; i.e., Rast, Bayyati, Sikah, Saba, `Ajam, Nahawand, Kurd, Nawa Athar, and Hijaz if there are nine *faṣā'il*, these plus `Iraq and Huzam if there are eleven. Salah al-Din and Jabaqji's eight fundamental modes include the "standard nine" minus Nawa Athar (which they place within the Nahawand *faṣīlah*).

Those who use the *faṣīlah* system to isolate the main maqamat commonly refer to the non-fundamental modes in each *faṣīlah* as "subsidiaries" (*furū`*) or as "branch" or "subsidiary modes" (*al-maqāmāt al-far`iyyah*). These theorists thus present a two-tiered classification of the maqamat, i.e., "fundamental" and "branch/subsidiary" modes (*al-asāsiyyah* versus *al-far`iyyah*) (Salah al-Din in *al-Halqah* 1964:64; Jabaqji 1976:51; Surur 1986:177ff.). This two-tiered classification is presently taught at the main Cairo music conservatories (see also al-Hifni c.1946:136; Fakhuri n.d.:56ff.). [17]

d. *Additional Subdivisions Within the Fasilah System of Classification*

Many present the *faṣīlah* method of classification as a simple two-tiered system, with either the various tetrachords or a group of primary modes occupying the first tier, and the numerous modes which belong to each *faṣīlah* occupying the second tier. Others incorporate some other principle or principles in addition to classification by lower tetrachord and thus recognize additional sub-categories within the system. The second *halqah*, for example, divides the *fasā'il* into two groups, i.e., those based on tetrachords which include three-quarter-step intervals and those based on tetrachords free of such intervals:

The Fasilah Classification of the Second Halqah
(adapted from al-Halqah 1964:12-13)

I. tetrachords free of 3/4-step intervals	description of the intervals	maqamat belonging to each fasilah
`Ajam	4 4 2	`Ajam, `Ajam `Ushayran, Shawq Afza, Jaharkah.
Nahawand	4 2 4	Nahawand, Nahawand Kabir, Nahawand Sinbulah (also called Nahawand Murassa`), Busalik, `Ushaq Masri, Farahfaza, Sultani Yakah.
Nawa Athar	4 2 6	Nawa Athar, Nakriz, Basandidah, Hisar.
Kurd	2 4 4	Kurd, Hijaz Kar Kurd, Tarz Nuwin, Shawq Tarab.
Hijaz	2 6 2	Hijaz, Hijaz Humayun, Shahnaz, Shadd `Araban, Suzdal, Zingaran, Hijaz Kar, Jaharkah Turki.

II. tetrachords with 3/4-step intervals	description of the intervals	maqamat belonging to each fasilah
Rast	4 3 3	Rast, Suznak, Suzdilara, Rahawi, Mahur, Kirdan, Yakah, Majlis Afruz, Nishaburk.
Bayyati	3 3 4	Bayyati, `Ushaq Turki, Husayni, Muhayyar, Qarjighar [also called Shuri], `Ardibar, Husayni `Ushayran.
Saba	3 3 2	Saba.
`Iraq	3 4 3	`Iraq, Bastanikar.
Sikah	3 4 4	Sikah.
Huzam	3 4 2	Huzam, Rahat al-Arwah.

In arguably the most developed statement of the fasīlah system, Muhammad presents nine "fundamental" maqamat which occupy the first tier and then subdivides the modes which occupy the second tier within each fasīlah into two groups. The first group includes those modes which share the same lower tetrachord (jins al-asl) and the same tonic note as the fasīlah's dominant mode. The second group includes modes which share the same lower tetrachord but differ with respect to their tonic pitch (1984:33ff.). [18] When presenting the maqamat, Muhammad proceeds by fasīlah, systematically presenting first the fundamental mode and then the two categories of secondary modes. The following chart, adapted from Muhammad's work (p.34-37), illustrates how Muhammad presents nine of the seventeen modes she includes in the Rast fasīlah (she presents the modes using staff notation):

Muḥammad's Rast Faṣīlah

Maqam Rast, The Basis Of The Faṣīlah (asās al-faṣīlah):

```
C    D    E-b-    F     G    A    B-b-    c
¦__Rast tetra.___¦     ¦__Rast tetra.___¦
```

A. Maqamat in the Rast Faṣīlah Related by the Same Initial Step:

1. maqam Suznak:

```
C    D    E-b-    F     G   Ab        B    c
¦__Rast tetra.___¦     ¦__Hijaz tetra._¦
```

2. maqam Shurak, i.e., "Suzdilara":

```
C    D    E-b-    F     G      A   Bb      c
¦__Rast tetra.___¦     ¦Nahawand tetra.¦
```

3. maqam Nirz Rast:

```
C    D    E-b-    F     G   A-b-  Bb       c
¦__Rast tetra.___¦     ¦_Bayyati tetra.¦
```

4. maqam Mahur:

```
C    D    E-b-    F     G      A      B    c
¦__Rast tetra.___¦     ¦__`Ajam tetra._¦
```

5. maqam Dalanshin:

```
                              ¦ Saba tetra. ¦
C    D    E-b-    F     G    A    B-b-    c   db
¦__Rast tetra.___¦     ¦__Rast tetra.___¦
```

etc.

B. Maqamat in the Rast Faṣīlah Related by a Different Initial Step:

1. maqam Yakah: (it is maqam Rast transposed to GG)

```
GG   AA   B-b-   C     D     E    F=/=    G
¦__Rast tetra._¦     ¦__Rast tetra.___¦
```

2. maqam Majlis Afruz:

```
GG   AA   B-b-   C     D   E-b-   F       G
¦__Rast tetra._¦__Rast tetra._¦
```

3. maqam Nishaburk:(it is maqam Nirz Rast transposed to D)

```
D    E    F=/=   G     A    B-b-   c      d
¦__Rast tetra._¦     ¦_Bayyati tetra.¦
```

etc.

A new development in the *faṣīlah* concept appears in Surur's dissertation (1986:178ff.) when he creates a separate subdivision within many of the *faṣā'il* for those few modes which do not conform in the structure of their lower tetrachords to the other modes of their *faṣīlah*. The modes in question are those built upon rarely used tetrachords such as Mustaʿar, Sazkar, Saba Busalik, and Saba Zamzamah. (The practice of placing such modes in the most closely related *faṣīlah* is discussed in Section 2.b above.) Surur coins the term *mulḥaqāt* (s. *mulḥaqah*; literally, "addition, supplement, appendage") to refer to the modes in this new subcategory. Thus, when presenting the maqamat, Surur proceeds by *faṣīlah*, first giving the *fasilah*'s principal mode, then its branch modes (*furuʿ*; i.e., modes which share the same lower tetrachord), and then any existing *mulḥaqāt*. Alternatively, Surur calls modes in this last category by the name *tawābiʿ* (s. *tābiʿ*; literally, "supplement"). The following chart gives examples from Surur's classification of the maqamat:

principal maqamat	branch modes (*furu`*)	additional modes (*mulhaqat*)
1. maqam Rast (C D E-b- F G...)	Kirdan, Suznak, Nirz Rast, Mahur, Dalanshin, etc.	Naz (C D E-b- F Gb A Bb c) Zawil (C D E-b- F... and C D Eb F# G...) Sazkar (C D# E-b- F G A B-b- c)
2. maqam Bayyati	Shuri, Bayyatayn, Muhayyar, Husayni.	
3. maqam Saba (D E-b- F Gb...)		Saba Zamzamah(D Eb F Gb..) Saba Busalik (D E F Gb...)

In his version of the *faṣīlah* system, al-Sabbagh creates a truly three-tiered classification of the maqamat. As mentioned above, al-Sabbagh recognizes ten "principal maqamat" (*al-anghām al-aṣliyyah*), nine of which head a separate *faṣīlah* [19]; all other modes are said to derive from these principal modes (1950:34). Beyond these ten, al-Sabbagh finds only an additional seven modes which "have their own special character [*ṭābi`*] and their own special joy/bliss [*ladhdhah*]" (ibid.:35). These seven make up his second category, which he calls "the branch/secondary maqamat" (*al-anghām al-far`iyyah*). The remaining modes form a third and theoretically open-ended category called "the technical modes" (*al-anghām al-isṭilāhiyyah*). al-Sabbagh claims that the "technical" modes do not have their own independent character and are thus best viewed as variants of one of the principal modes. [20] The "branch" and "technical" modes are all placed within one or another of the nine fasā'il on the basis of structural affinities to the nine principal modes, the most prominent factor being that they share the same lower tetrachord. In all, al-Sabbagh mentions seventy-three "technical" modes, but he indicates that there are others which he has not listed (including additional modes which have "Kurd" or "Busalik" in their names). al-Sabbagh's classification of the maqamat is summarized in the following chart:

al-Sabbagh's classification of the modes (1950:41ff.)

"the principal modes" (*al-anghām al-aṣliyyah*)	"branch/secondary modes" (*al-anghām al-far`iyyah*)	"technical modes" (*al-anghām al-iṣṭilāhiyyah*)
1. Rast	-	a. Yakah
		b. Suzdilar
		c. Shurak
		d. Suznak
		e. Sharf Nama
		f. Nishaburk
		g. Rahawi
		h. Banjkah
		i. Mahur
		j. Zawil
		k. Hayyan
		l. Nirz
		m. Basandid
		n. Dalanshi
		o. Sazkar
2. Nahawand	a. Nawa Athar	a. Sultani Yakah
	b. Nakriz	b. Farah Fazah
		c. Dalkashidah
		d. Nahawand Kabir
		e. Nah. al-Sinbulah
		f. Busalik
		g. Muhayyar Busalik
		h. Husayni Busalik
		i. `Ushaq Masri
		j. Hisar
		+ other Busalik modes
3. Hijaz Kar Kurd	-	a. Kurdi
		b. Muhayyar Kurdi
		c. Tarz Nawayn
		d. Shawq Tarab
		e. `Ajam Kurdi
		+ other Kurd modes
4. Hijaz	a. Hijaz Kar	a. Hijaz Gharib
	b. Zinkulah ("mistakenly called Zingaran by some")	b. Hijaz Humayun
		c. Shatt `Araban
		d. Suzdal
		e. Awj Ara
		f. Shahnaz
		g. Hijazayn

al-Sabbagh's classification of the modes (continued)

"the principal modes"	"branch/secondary modes"	"technical modes"
5. Bayyati	a. Bayyati Shuri (Qarjighar Turki)	a. Husayni 'Ushayran
		b. Bayyati 'Ushayran
		c. Busalik 'Ushayran
		d. Nahuft
		e. Husayni
		f. Muhayyar
		g. Bayyati 'Araban
		h. Kul'izar
		i. 'Ajam
		j. 'Ushaq Turki
		k. Tahir
		l. Tahir Busalik
		m. Isfahan
		n. Nawa
		o. Bayyati Sultan
		p. 'Ardibar
		q. 'Ajam Murassa'
		r. Kirdan
		s. Zafaratayn
6. Saba	-	a. Saba Busalik
		b. Saba Zamzamah
7. Sikah 'Arabi [Huzam]	a. Sikah Turki [Sikah]	a. Mayah
		b. Musta'ar
		c. Shi'ar
		d. Wajh 'Ardibar
		e. Nishabur (**)
		f. Sikah Gharib
8. Jaharkah	-	-
9. 'Ajam 'Ushayran	-	a. Shawq Afza
		b. Shawq Ara
		c. Tarz Jadid
		d. Tabriz
10. 'Iraq	a. Bastah Nikar(*)	a. Rahat al-Arwah
		b. Farahnak
		c. Bastah Isfahan
		d. Awj
		e. Dilkish Hawran

notes for the previous chart:

(*) Bastah Nikar (Bastanikar) is included among the "branch" modes in al-Sabbagh's 1954 book (p.45). In his 1950 work it is given as one of the "technical" modes of the 'Iraq fasilah (p.53).

(**) al-Sabbagh remarks that Nishabur is included as a "technical" mode of the Sikah faṣīlah only as a matter of convenience. Nishabur, he writes, has the same structure as the mode Musta'ar (E-b- F# G A Bb c ...) but it settles on the note E natural rather than E-b- (1950:51), thus it is E F# G A Bb c ...

- - - - - - - - - - - - - -

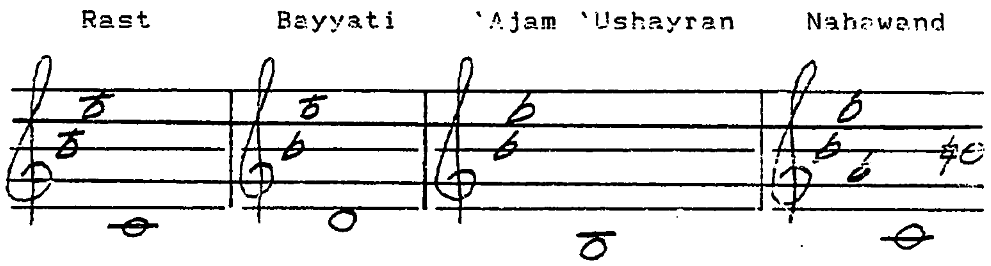
In summary, classification by lower tetrachord first appears in the literature in 1933. Theorists have recognized as few as seven and as many as fifteen faṣā'il; nine and eleven are the standard numbers of faṣā'il taught at the main Cairo music institutes in the present day. Many theorists use the faṣīlah system to isolate the main modes of modern-day Arab music. They do so by naming a fundamental mode for each faṣīlah. The other modes are called "secondary modes" or "derivatives" (furū'). Some theorists recognize further subdivisions in their faṣīlah systems. They do so by establishing sub-categories based either on the types of intervals in the various tetrachords, on the modes' tonic pitches, or on subjective rankings of the extent that each mode has its own independent character.

3. Classifying the Modes by Key Signature

After the adoption of Western notation a number of theorists sought to classify the maqamat according to the key signatures used for transcription. This is the last of the three main present-day classification systems to be devised, first appearing in the sources for the present study in a 1946 work by Salah al-Din. Subsequently, key-signature based theories have been proposed by Yusuf Shawqi (1964) and `Abd al-Hamid Mash`al (in al-Tafsir n.d.), and are acknowledged by many present-day Cairo theorists when transcription is being discussed. Such theories commonly recognize either two or four key signatures (adillah, s. dalīl; or armatūrāt, s. armatūrah, from the French, "armature"), each of which is associated with a fundamental mode. Other modes are said to "derive" from the two or four fundamental modes either by tonic shifts or by the introduction of one, two, or more accidental signs.

a. Salah al-Din

Salah al-Din introduces his key signature-based classification system in his Miftah al-Alhan al-'Arabiyyah ([1946] 1950). He restates his theories with slight modifications in his Taswir al-Alhan al-'Arabiyyah ([1948] c.1950) and in a chapter he contributed in the publication of the second halqah (al-Halqah 1964:17ff.). Salah al-Din writes, "All of the Arab maqamat ... can be transcribed on ... four fundamental key signatures" (1950:98; see also 1943:27 and 1964:23). Each of the key signatures is named after a prominent maqam, the tonic pitch of these maqamat being called the first degree of the respective key signature:



They are the Rast *dalīl*, containing two half-flats (B-b- and E-b-) and beginning on the note C (Rast/do); the Bayyati *dalīl*, containing one flat (Bb) and one half-flat (E-b-) and beginning on the note D (Dukah/re); the 'Ajam 'Ushayran *dalīl*, containing two flats (Bb and Eb) and beginning on the note BBb ('Ajam 'Ushayran/si *bīmūl*); and the Nahawand *dalīl*, containing three flats (Bb, Eb, and Ab) and beginning on the note C. This last key signature has the Bb countermanded by the addition of a natural sign within the transcription whenever the note B natural is needed (maqam Nahawand uses both Bb and B natural). [21]

On the basis of these four key signatures Salah al-Din recognizes three categories of modes. The first category contains "the fundamental maqamat" (*al-maqāmāt al-asāsiyyah*), Rast, Bayyati, 'Ajam 'Ushayran, and Nahawand. A fundamental mode is defined as one "which is transcribed on one of the four key signatures ... with the condition that it begins its scale from the first degree of the key signature and its notes follow the order of the key signature without any changes" (1950:97).

The second category of modes contains "the derived maqamat" (al-maqāmāt al-mushtaqqah). These modes are transcribed on one of the four key signatures but differ from the fundamental modes in one of two ways. A derived mode either "begins its scale ... from the first degree of the key signature (with the introduction of some accidental signs ['alāmāt al-tahwil] to its notes)," or it "begins from one of the other notes" of the key signature (ibid.). The following chart gives examples of some of the modes derived from the Rast key signature:

Examples of the Modes Which Use the Rast Key Signature

(from Salah al-Din 1946 and 1950; any accidental signs are to be applied throughout the transcription)

A. The Fundamental Mode:

Rast: C D E-b- F G A B-b- c

B. Derived Modes:

1) Modes Derived from the First Note of the Key Signature:
(Salah al-Din acknowledges that these modes belong to the Rast *faṣīlah*; 1950:106ff.)

Mahur: C D E-b- F G A B c
(needs B natural accidental signs)

Suznak: C D E-b- F G Ab B c
(needs Ab and B natural accidental signs)

Suzdulara: C D E-b- F G A Bb c
(needs Bb accidental signs)

Dalanshin: C D E-b- F G A Bb c db
(needs db accidental signs)

2) Modes Derived From Other Notes of the Key Signature:

a) an example of a mode derived from the second degree:
Husayni: D E-b- F G A B-b- c d [22]

b) two examples of modes derived from the third degree:
Sikah: E-b- F G A B-b- c d e-b-

Huzam: E-b- F G Ab B c d e-b-
(needs Ab and B natural accidental signs)

c) an example of a mode derived from the fourth degree:
Jaharkah: F G A Bb c d e-b- f
(needs Bb accidental signs)

d) an example of a mode derived from the fifth degree:
Yakah: GG AA BB-b- C D E-b- F G

e) an example of a mode derived from the sixth degree:
Husayni 'Ushayran:
AA BB-b- C D E-b- F G A

f) an example of a mode derived from the seventh degree:
'Iraq: BB-b- C D E-b- F G A B-b-

Salah al-Din recognizes a third category of maqamat, maqāmāt mutashābihah (literally, "similar" or "identical" modes). This category is reserved primarily for transposed modes, i.e., "maqamat which resemble each other in the intervals of the lower and upper tetrachords and the type of joining of the tetrachords but differ with respect to the tonic pitch ..." (1950:104). (When a mode is transposed, the key signature is also transposed resulting in new forms of the four original key signatures. [23]) Salah al-Din also uses this term to refer to modes which share the same scale, tetrachords, and the same tonic pitch but which differ in the manner of performance (ibid.:115). For example, the modes Husayni and Muhayyar are said to differ only in that the former follows an ascending progression while the latter follows a descending progression.

In all, Salah al-Din recognizes thirty-five maqamat which use the Rast key signature (1950:105-130), fifteen modes which use the Bayyati key signature (ibid.:134-142), over fifty modes which can be transcribed using the Nahawand key signature (ibid.:146-187), and four modes which are transcribed using the `Ajam `Ushayran key signature (ibid.:188-192). [24]

b. Yusuf Shawqi

Yusuf Shawqi also presents a key signature-based classification of the modes in the same halqah publication that contains a version of Salah al-Din's theories (*al-Halqah* 1964:15 and 33ff.). Shawqi's classification, what he calls "a scalar theory" for Arab music, is similar to that proposed by Salah al-Din except that Shawqi recognizes only two key signatures. In addition, he applies a terminology derived from Western music theory to the key signatures and also to the various scales which begin on successive degrees of these key signatures.

Shawqi recognizes one key signature for all the modes which have three-quarter-step intervals and another for the modes which do not contain such intervals, calling these the "the Arab major key signature" (*al-dalīl al-kabīr al-'Arabī*) and "the Western major key signature" (*al-dalīl al-kabīr [mājīr] al-'āmm*), respectively (ibid.:15). For each of the two key signatures Shawqi recognizes a fundamental scale. He calls these "the Arab major scale" (*al-sullam al-'Arabī al-kabīr*) which is maqam Rast in any of its transpositions (p.34), and "the West's major scale" (*al-sullam al-mūsīqá al-kabīr al-'āmm*) in any of its transpositions (p.35). Imitating the Western practice wherein the major scale has a relative minor scale which shares the same key signature (p.38), Shawqi declares that Arab music can be seen as having two types of minor scales which share the same key signature as the Arab major scale: the Arab minor scales are "the Arab direct minor scale" (*al-sullam al-'arabī al-ṣaghīr al-mubāshir*) which "derives directly from the [Arab] major scale by centering on [its] second degree ascending" (p.34) and the "Arab relative minor scale" (*al-sullam al-'arabī al-saghīr al-munāsib*) which is derived by centering on the third degree ascending. The former gives the scale of maqam Husayni while the latter gives that of maqam Sikah.

Shawqi explains that his "... scalar theory seeks to classify the relations between the maqamat ... to discover a logical codification for these relations in the form of three kinds of Arab scales: the major [*al-kabīr*], the direct minor [*al-saghīr al-mubāshir*] and the relative minor [*al-saghīr al-munāsib*] ... This is the same broad lines as the scalar theory in European music" (ibid.:39).

the Arab major scale (that of maqam Rast):
C D E-b- F G A B-b- c

the Arab direct minor scale (that of maqam Husayni):
D E-b- F G A B-b- c d

the Arab relative minor scale (that of maqam Sikah):
E-b- F G A B-b- c d e-b-

While these scales can be tranposed to any degree, Shawqi emphasizes that they commonly occur transposed down a fourth, i.e., starting on GG, AA, and BB-b-, respectively. As is the case with Salah al-Din's theories, those maqamat which require notes not contained in these scales would be transcribed with accidental signs added not to the key signature but rather throughout the transcription wherever needed.

In its final presentation (see chart below), Shawqi's system for classifying the modes closely matches that of Salah al-Din except that Shawqi's is expressed in terms of a system of major and minor modes. The modes which Salah al-Din presents as being derived from the first and fifth degrees of the Rast scale (see the modes in categories 1 and 2.d. on p.400 above) are said to use "the Arab major scale" in Shawqi's classification (see A.1 in the chart below). Those which Salah al-Din presents as being derived from the second and sixth degrees of the Rast scale (see 2a and 2e on p.400) are said to use "the Arab direct minor scale" in Shawqi's system (see A.2 in the chart below). And those which Salah al-Din presents as being derived from the third and seventh degrees of the Rast scale (see 2b and 2f on p.400) are said to use "the Arab relative minor scale" in Shawqi's system of classification (see A.3 in the chart below).

Yusuf Shawqi's Classification of the Maqamat (1964:33ff.)

A. The Maqamat Which Use "the Arab Major Key Signature" (Shawqi lists forty-four maqamat in this section plus an unspecified number of transposed modes): [25]

1. The Maqamat Which Are Transcribed Using "the Arab Major Scale":
   a. those based on the note C (Rast/do; Shawqi uses the solfege names):
      Rast Suznak Suzdular Rahawi Mahur
      Zawil Nirz Rast Dalanshin Sazkar

      + tranpositions of the same such as Nishabur(which is based on D).

   b. those based on the note GG (Yakah/sol): Yakah

      + transpositions to GG of the maqamat listed in 1a above.

2. The Maqamat Which Are Transcribed Using "the Arab Direct Minor Scale":
   a. those based on D (Dukah/re):
      Husayni Bayyati Muhayyar Bayyati 'Araban
      Qarjighar Kul'izar Tahir 'Ushaq Turki
      Iskfahan Kirdan 'Ardibar Sultani Bayyati
      'Ajam Murassa' Saba Dukah Saba Zamzamah

   b. those based on AA ('Ushayran/la):
      Husayni 'Ushayran Bayyati 'Ushayran
      Busalik 'Ushayran Nahuft

      + transpositions to AA of the maqamat listed in 2a.

3. The Maqamat Which Are Transcribed Using "the Arab Relative Minor Scale":
   a. those based on E-b- (Sikah/mi-b-):
      Sikah Huzam Musta'ar Mayah Wajh 'Ardibar

      + transpositions to E-b- of the maqamat listed in 3b below.

   b. those based on BB-b- ('Iraq/si-b-):
      'Iraq Rahat al-Arwah Farahnak
      Bastah Isfahan Dalkash Hawran Awj (B-b-)
      Bastah Nikar Awj Ara Rawnaq Nama

      + transpositions to BB-b- of the maqamat listed in 3a above.

B. The Maqamat Which Use "the Western Major Key Signature" (here Shawqi lists thirty-two maqamat plus an unspecified number of transposed modes): [26]

1. The Maqamat Which Use the West's Major Scale:

   a. those based on BBb and F (‘Ajam ‘Ushayran/si bimul and Jaharkah/fa, respectively):

      ‘Ajam ‘Ushayran
      Shawq Afza
      Shawq Ara
      Jaharkah

      + their transpositions to other degrees.

   b. those which center on the third degree ascending of the major scale in its various transpositions:

      Hijaz Kar Kurd
      Muhayyar Kurd
      Saba Kurd
      Tarz Nawin
      Hisar Kurd
      Shahnaz Kurd
      Kurd
      ‘Ajam Kurd
      Nawa Kurd

      + their transpositions to other degrees.

2. The Maqamat Which Use the West's Minor Scale ("be it the direct or the relative"; p.38):

   a. those which center on the tonic of the minor scale in its various transpositions:

      Farah Fazah
      Bisandidah
      Nawa Athar
      Busalik
      Sultani Yakah
      Nahawand
      Nakriz
      Hisar
      Hiyan
      Nahawand al-Kabir
      Nahawand Sinbulah

      + their transpositions to other degrees.

   b. those which center on the fourth descending or the 5th ascending of the minor scale in its various transpositions:

      Shadd ‘Araban
      Hijaz Kar
      Awj Hijaz
      Suzdal
      Zinkulah
      Shahnaz
      Shawq Tarab
      Hijaz

      + their transpositions to other degrees.

c. *`Abd al-Hamid Mash`al*

In his *al-Tafsir al-`Ilmi* (n.d.), Mash`al proposes a system for classifying the maqamat which can be seen as a variation on Shawqi's theories. Like Shawqi, Mash`al recognizes two fundamental modes (*al-maqāmāt al-asāsiyyah*; p.60), namely Rast and `Ajam, and seeks to derive all the other maqamat from these two modes. He also seeks to transcribe all the modes using only two key signatures, a key signature of E half-flat and B half-flat for Rast and its derivatives and an empty key signature for maqam `Ajam (which he builds on the note C) and its derivatives.

Mash`al derives four additional modes by shifting the tonic up and down a third on each of the two fundamental scales (in apparent imitation of the relationship between the major and relative minor scales of Western music). These four modes are called "the derived modes" (*al-maqāmāt al-mustaqqah*; p.60). From Rast he derives Sikah and Bayyati while from `Ajam he derives the modes Kurd and Nahawand:

```
        / Bayyati  AA  BB-b- C  D  (E) F  G  A
       /
Rast  <                      C  D E-b- F  G  A B-b- c
       \
        \ Sikah                   E-b- F  G  A B-b- c  d e-b-

        / Nahawand  AA  BB C  D  E F (G#) A
       /
`Ajam <                    C  D  E F  G   A  B c
       \
        \ Kurd                   E F  G   A  B c  d  e
```

Mash'al then presents a third category of maqamat, those which "branch out" from the "fundamental" and "derived" modes. Calling them "the branch/secondary maqamat" (al-maqāmāt al-mutafarri'ah; p.60) Mash'al includes nineteen or twenty modes in this category (see the chart below). When the "derived" and "branch" modes require one or more accidental signs, these are to be inserted throughout the transcription rather than into the key signature.

Mash'al's theories are marked by his attempt to use only two key signatures without allowing any transpositions of the same. This leads him to recognize non-traditional positions for the maqamat. Nahawand and Bayyati, for example, are given on AA, while Kurd is given on E (their traditional "root" positions are C, D, and D, respectively). Shawqi avoided this by allowing transpositions of his two fundamental scales and their key signatures, and thus was able to present the maqamat in their traditional root positions.

Mash`al's classification of the maqamat: [27]
(showing his 2 fundamental maqamat, 4 derived maqamat,
and branch/secondary maqamat)

```
         `Ajam                                      Rast
       /         \                               /        \
 Nahawand        Kurd                 Bayyati      :    Sikah
                                                   :
     :             :                     :         :       :
                                                   :
1. NawaAthar 1. Hijaz              1. BayyatiShuri :  1. Huzam
2. Nakriz    2. Saba Kurd             (Qarjighar)  :  2. Musta`ar
               (SabaZamzamah)      2. Saba         :  3. `Iraq
             3. Athar Kurd         3. Jaharkah     :  4. Rahat
             4. Hijaz Kar          4. Zinkulah     :       al-Arwah
             5. Tarz Nawayn                        :  5. Bastanikar
             6. Zinjaran                           :
                                          1. Suznak
                                          2. Sazkar
                                        (later replaced by
                                         Suzdular w/ Db)
```

d. Concluding Comments on Key Signature-Based Classification Systems

While key signature-based theories can easily be labeled as farfetched--key signatures were, after all, introduced into Arab music only recently--these theories do recognize aspects of the maqam system which are ignored by the tonic pitch and fasīlah systems of classification. Most significantly, key signature classifications group together serial modes, i.e., modes which share the same scalar material but which differ with respect to the note that is considered the tonic. The most noteworthy example of such a group of modes includes the maqamat Yakah, `Ushayran, `Iraq, Rast, Husayni, and Sikah. These modes all share a scale which is represented by a key signature of B-b- and E-b-. Since they have different tonics and a number of different root tetrachords, the tonic pitch and fasīlah systems of classification do not recognize any aspect of similarity among these modes.

```
GG  AA  BB-b-  C   D  E-b-  F    G    A   B-b-  c    d   e-b-
 :   :    :    :   :   : Yakah   :    :    :    :    :    :
 ------------------------------       :    :    :    :    :
     :    :    :   :   : `Ushayran    :    :    :    :    :
     ------------------------------        :    :    :    :
          :    :   :   :        `Iraq      :    :    :    :
          ------------------------------        :    :    :
               :   :   :          Rast          :    :    :
               ------------------------------        :    :
                   :   :          Hussayni           :    :
                   ------------------------------         :
                       :             Sikah                :
                       ------------------------------
```

Other examples of scalar relationships include those which exist between the modes `Ajam `Ushayran and Kurd and between Hijaz and Nahawand on G. The latter pair is an example of two modes existing in a plagal relationship. Such relationships are not noted in any of the other classification systems.

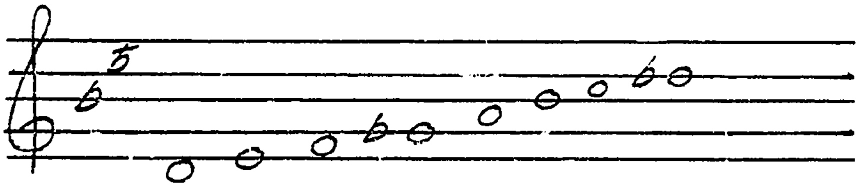
```
`Ajam `Ushayran:   BBb  C   D Eb   F   G   A Bb
Kurd:                       D Eb   F   G   A Bb   c   d

Hijaz:             D Eb     F# G   A Bb   c   d
Nahawand on G:                 G   A Bb   c   d eb      f# g
```

Salah al-Din's use of only four key signatures is also not so farfetched since it is somewhat common in the Middle

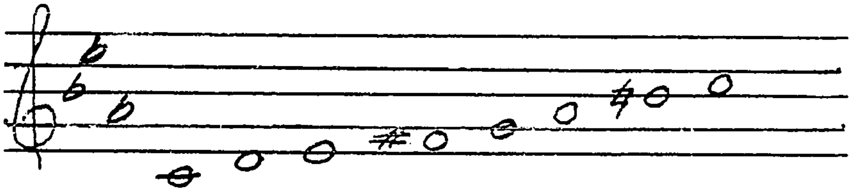
East to use only these four key signatures (plus their transpositions) when transcribing the maqamat and pieces of Arab music. One nay and theory teacher, for example, grouped the principal maqamat by Salah al-Din's four key signatures when he was asked to transcribe these modes on the Western staff: first he presented three maqamat that use the key signature of B-b- and E-b- (Rast, Sikah, and `Iraq); then two maqamat that use the key signature of Bb and E-b- (Bayyati and Saba); then three maqamat that use the key signature of Bb and Eb (Kurd, Hijaz, and `Ajam); and finally three maqamat that use the key signature of Bb, Eb, and Ab (Nahawand, Nawa Athar, and Huzam). [28]

One of the greatest shortcomings of the key signature-based classification systems is that theorists confine themselves to Western-derived key signatures (with the exception that flat and sharp signs are often replaced by half-flats and half-sharps). The scales indicated by these signatures contain whole-step, half-step, and three-quarter-step intervals but no augmented seconds. Augmented seconds, wherever they occur, must be considered as exceptions to the key signature, requiring accidental signs throughout the transcription. Maqam Nahawand, for example, often has an augmented-second interval between Ab and B natural. Following the rules of Western key signatures (rules which are widely followed in the Middle East) Ab can occur in the key signature only after one has written Bb and Eb in the key signature; i.e., one cannot write the flat signs out of order. Thus Nahawand is commonly assigned a key signature of three flats. Any occurrences of the note B natural require accidental signs in the transcription. For the same reason the augmented seconds between Eb and F# in the maqamat Hijaz and Nawa Athar and between Gb and A in Saba are not indicated in the key signature (see the previous note, number 28). These modes, then, must be considered as "derived" modes in key signature classifications; they cannot be "principal" or "fundamental" modes. Salah al-Din, Shawqi, and Mash'al all present maqam Saba as a derivative of maqam Bayyati or Husayni (requiring the addition of Gb accidentals throughout the transcription). Similarly, Nawa Athar is derived from Nahawand by the addition of F# accidentals. As for the augmented second in maqam Hijaz, Salah al-Din and Shawqi derive Hijaz from the fifth of maqam Nahawand transposed to GG; Mash'al derives Hijaz from maqam Kurd with the addition of F# accidentals.

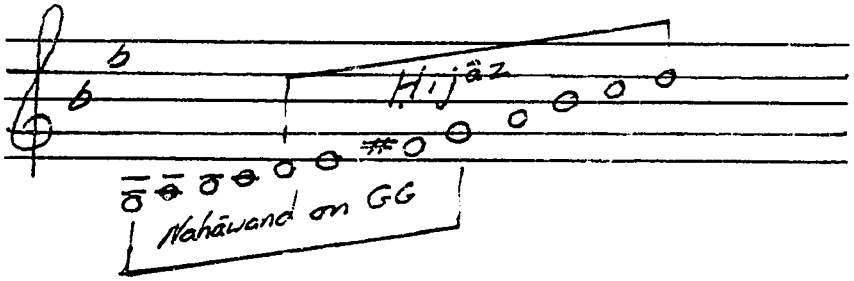
Saba with Bayyati's key signature:



Nawa Athar with Nahawand's key signature:



Hijaz derived from Nahawand transposed to GG:



C. Other Systems for Classifying the Maqamat

1. Simon Jargy

Like Salah al-Din, Shawqi, and Mash'al, Jargy focuses on the types of intervals used in the various maqamat when proposing a system of classification (1971:60-64); however, he differs by not paying attention to key signature. Jargy applies the classification system which D'Erlanger used in his analysis of tetrachords (1949:77ff.; discussed above, Chapter VI) and declares that "theoretically the Arab scale divides into three principal categories: diatonic, fundamental and chromatic" (ibid.:61). In his analysis of a dozen modes, he expands this three-fold classification to include five categories. These are: 1) a diatonic genre, containing modes made up of whole-tone and half-tone intervals (Hijaz Kar Kurd, Kurd, Jaharkah, and 'Ajam); 2) a fundamental genre, containing modes which are made up of whole-tone, half-tone, and three-quarter-tone intervals (Rast, Bayyati, Sikah); 3) a chromatic genre, containing modes in which each tetrachord has an augmented-second interval (Hijaz Kar); 4) a semi-chromatic genre, containing modes in which one tetrachord is diatonic but the other contains an augmented-second interval (Nahawand: C D Eb F G Ab B c); and 5) a cross between the fundamental and chromatic genres, containing modes in which one tetrachord contains three-quarter tones, the other an augmented-second interval (Hijaz, Saba, and Huzam).

Jargy's categories are essentially a classification of the kinds of intervals which occur in a mode's two primary tetrachords. His main contribution to the theories of Salah al-Din and others is that he recognizes a separate category for chromatic scales (i.e., those with augmented seconds).

2. Eastern vs. Western

It is rather common for theorists and musicians familiar with Western music to acknowledge a simple two-fold classification, separating those modes which have half-flats (i.e., three-quarter step intervals) from those which are free from such intervals. The former are referred to as "the Eastern/Oriental modes" (maqāmāt al-sharqiyyah), a designation which recognizes that these modes are a specialty of Arab music. In contrast, the latter are perceived as being a part of Western music practice (whether or not they are actually used in Western music). This two-fold division is incorporated in the halqah's faṣīlah classification and in the theories of Salah al-Din, Shawqi, and Mash'al (all discussed above). al-Hifni considered this point so important that for each of the twenty-four maqamat he discusses he comments whether the mode in question can be played on Western instruments. For example, for maqam Saba (D E-b- F Gb A Bb c db) he writes, "It contains, in its formation, quarter-tones; because of this it is not possible to perform those melodies which are composed in it on the Western instruments which are restricted to the Western twelve-tone scale [al-alāt al-gharbiyyah al-thābitah]" (c.1946:136). And for maqam Hijaz Kar (C Db E F G Ab B c) he writes, "... It is possible to perform melodies which are composed in it on Western instruments which are restricted to the Western twelve-tone scale" (ibid.:139).

3. Mashaqah's Four Ways In Which Modes Differ From One Another

Besides his presentation of the modes in ascending tonic order, Mashaqah also offers a second more general classification system according to which the modes are said to differ from each other in four ways ([c.1840] 1899:300-302). [29] The first of the four concerns modes which contain only the notes of the fundamental scale (Mashaqah's abrāj). These modes are said to differ from each other by being based on different notes. Mashaqah takes care to explain that he is not referring to the practice of modal transposition; rather, he is referring to different intervallic structures which result when different notes of the fundamental scale function as tonic. He offers two examples: the mode based on GG (Yakah) has the notes GG AA BB-b- C ... and thus begins with intervals of four-, three-, and three-quarter steps. The mode on AA (ʿUshayran), however, has the notes AA BB-b- C D ... and thus begins with intervals of three-, three-, and four-quarter steps.

Mashaqah concludes his discussion of this point by commenting, "... there is a separate mode having its tonic (qarār) on each of the fundamental notes and each mode is called by the name of the fundamental note on which it is based, such as Rast, Dukah, etc." (ibid.:301). A review of Mashaqah's modes reveals a mode "named after" each of the fifteen fundamental notes, i.e., from GG (Yakah) to g (jawab Nawa or Ramal Tuti). However, a review of Mashaqah's descriptions of these modes uncovers two problems with his first method of differentiating among the modes. First, five of the fifteen are presented as being based on a note other than that by which they are named, thus contradicting his concluding statement. [30] Second and more important, although Mashaqah suggests that these modes are formed only from the notes of the fundamental scale, in fact, this is true for only four of the fifteen modes. The other eleven use notes other than those of the fundamental scale. Four, for example, use Bb instead of B-b- (Dukah, Jaharkah, Mahuran, and Nawa); three use E natural (Yakah, `Ushayran, and Mahur, the latter using both E natural and E-b-). [31] This suggests that Mashaqah's first point presents an ideal (i.e., that these modes are built from the notes of the fundamental scale) rather than a description of how the modes existed in practice in his day (see further discussion of this point below).

Mashaqah's second way in which modes differ from one another concerns modes which share the same notes and the same tonic. These modes can differ in two ways, first, in "the manner of execution [ijrā' al-`amal] when moving from one note to another," and second, in the manner of "entering into the mode" (ibid.:301). Mashaqah does not offer an example for the first point claiming that the lack of a system of notation makes this impossible (this was before the introduction of Western staff notation into Arab music). For the second point he gives the example of the modes Dukah and Saba. In Mashaqah's day these two modes shared the same notes and tonic (apparently Saba had not yet acquired the Gb that is today its most characteristic feature) but differed in that the mode Dukah was performed by beginning with the note C (Rast) followed by an ascent to G (Nawa) while Saba began with the note F (Jaharkah). [32] (Specific starting notes for each maqam are discussed further in Section I of Chapter X below.)

The third way in which modes are said to differ is based on the assumption that it is common for modes to be formed exclusively from notes of the fundamental scale. (A similar assumption is found in the first of Mashaqah's four points.) The third difference arises between these modes and others in which one or more of the notes are "corrupted [yufsad] ... meaning that [their] place is taken by one of the non-fundamental notes [the arbāʿ]" (ibid.:302). As examples Mashaqah gives the modes Hijaz and Bayyati. The former uses F# instead of F and the latter Bb instead of B-b-. (Hijaz was then conceived as having E-b- instead of Eb; thus the F# was the only "corrupted" note.) [33] A review of the ninety-five modes described in Mashaqah's work reveals that all but twelve use non-fundamental notes. Thus, once again, Mashaqah's emphasis on fundamental notes seems to be more a reflection of an ideal (that most modes are composed exclusively of fundamental notes, that modes which use non-fundamental notes are rare enough to be relegated to a separate category) than it is a response to the realities of the performance practice of his day.

It is possible that this ideal was better realized in the pre-modern period. It is interesting to note in this regard that five of Mashaqah's fifteen "fundamental note modes" are no longer mentioned in contemporary maqam lists, the five being Dukah, Nawa, Buzrak, Mahuran, and Ramal Tuti (of these Dukah can be seen as continuing to exist under a new name, i.e., Bayyati or 'Ushaq Turki). Of the ten modes which remain, only two or three are featured prominently in contemporary practice (i.e., Rast, Jaharkah, and, to a lesser extent, Sikah). The modes Yakah (GG), 'Ushayran (AA), 'Iraq (BB-b-), Hussayni (A), Awj (B-b-), Mahur or Kirdan (c), and Muhayyar (d) must be considered as rare maqamat in the present day. One result of the lack of prominence of these modes is that it is no longer common for theorists or musicians to isolate the "fundamental-note modes" when discussing the modes of modern-day Arab music. Considering the evidence of new modes being introduced in the late-nineteenth and early-twentieth centuries (especially comments about the maqamat 'Ajam, Nahawand, Kurd, and Hijaz Kar; see Chapter VIII, Section C.2 above), it is possible that the central group of modes has shifted over the last 200 or more years to give more importance to Western- diatonic and chromatic modes.

Mashaqah's fourth point for distinguishing among the various modes isolates those maqamat which are "doubled" (muzdawijan) (ibid.:302). Saying that these modes use more than seven notes by using notes in two octaves, Mashaqah offers three examples: in the mode Muhayyar one first plays the mode Dukah in the octave on d (Muhayyar) and then closes by playing Dukah again on D (Dukah). The same occurs in the mode Shatt 'Araban where one first plays Hijaz on G followed by Hijaz on GG, and in the mode 'Ushayran where one first plays Bayyati on A followed by Bayyati on AA. This fourth point can be seen as a specific instance of modes which share the same notes but differ in the manner of execution (i.e., the first part of point three above) for Muhayyar, Shatt 'Araban, and 'Ushayran are said to differ from the modes Dukah, Hijaz, and Bayyati, respectively, even though they share the same notes and the same tonic pitches.

We can analyze this fourth point from the perspective of present-day practice: In the present day, it is commonly understood that *all* modes can be performed "using the notes in two octaves." Mashaqah seems to imply that this was not true in his day. (The issue of modal ambitus is discussed further in Section C of Chapter X below.) When improvising in a given mode today a musician often starts in the lower octave and then proceeds into the higher octave. From the perspective of this present-day practice it can be argued that the most significant features of Mashaqah's "doubled" modes are, one, that the higher octave must be played first, and two, that the overall progression is thus descending rather than ascending. The use of "ascending" versus "descending" as classificatory categories is occasionally recognized in the present day (see Section D.1 below in this chapter).

4. Shihab al-Din's "usul" and "furu`"

In a work which is predominently a collection of song texts Shihab al-Din (c.1840) incorporates a two-fold classification of the maqamat. He declares that he first presents those songs which are set in six "fundamental modes" (al-uṣūl), i.e, Rast, Sikah, Jaharkah, Nawa, Husayni, and `Iraq (`Iraqi). Then he presents songs set in six "branch" or "secondary" modes (al-furū`). These are `Ushaq, Hijaz (Hijazi), Shawrak (Shurak?), Saba, Isfahani, and Nirz (1892:20-21). Unfortunately, the basis of Shihab al-Din's classification is not clear nor is it known if this classification existed beyond the confines of Shihab al-Din's work; it is not mentioned in any of the other sources for the present study. It is noteworthy that Shihab al-Din's "fundamental" modes correspond to the names of the fundamental notes C, E-b-, F, G, A, and B-b-, respectively. Thus, it is possible that Shihab al-Din is presenting a classification which isolates "fundamental-note modes." This would be in keeping with Mashaqah's emphasis on such modes. If this is the basis for Shihab al-Din's classification, however, the absence of a D-based mode among his "fundamental" modes is puzzling.

5. Fathers vs. Sons and Classifications Inherent in Publications of Song Texts

Idelsohn (1913) discusses two forms of classification which are not mentioned in any of the other works used for the present study. First, he writes that "one differentiates between main maqamat or fathers and secondary maqamat or sons" (p.13). The latter are said to derive from the former. Idelsohn lists twelve sons (I give the standard spellings for these modes): Rast, Bayyati, Saba, Hijaz, ‘Ushaq, Sikah, ‘Iraq, Awj, Husayni, Nawa, ‘Ajam, and Nahawand. He lists the following thirteen sons: Mahur, Rahawi, Isfahan, Busalik, ‘Ushayran, Sazkar, Hijaz Kar, Jaharkah, Mahuran, Shuri, Shawrak, Shahnaz, and Ramal (the first seven sons are said to be well known; the last six are said to be less known). Unfortunately, Idelsohn does not explain the manner by which the sons are derived from the fathers. He also does not mention where he learned of this classification system.

Idelsohn finds a second method for classifying the maqamat in collections of song texts. In these works, called diwāwīn (s. dīwān), the songs are arranged by maqam, maqamat with common scales and common tonics appearing together (p.14). Idelsohn lists the maqamat that appear in nine such diwāwīn (p.14-16). All nine begin with maqam Rast. Syrian diwāwīn end with Hijaz, Isfahan, or ‘Uzal. Beyond these points, however, a brief review of these nine lists does not reveal any consistent method by which the modes are arranged in these collections.

6. Ranking the Maqamat According to the Degree of Difficulty Each Mode is Thought to Present to the Student

Following the institutionalization of music education in the first part of the twentieth century (see Chapter I), there was a move to rank the maqamat by the degree of difficulty each mode was thought to present to the student of Arab music. This issue was first addressed in the 1932 Congress (Kitab Mu'tamar 1933:342). al-Hifni presents such a ranking of the modes in his al-Musiqa al-Nazariyyah ([1938] c.1946). He assigns the modes to different years in a multi-year curriculum designed for lower- and higher-secondary schools and for higher institutes of music. al-Hifni begins first with maqam Rast, because of its position as the "basis of [all] the maqamat of Arab music" (ibid.:124), and then gives the modes 'Ajam 'Ushayran and Nahawand. al-Hifni explains that although he gives maqam Rast first, it is good to begin lessons on the Arab maqamat with 'Ajam 'Ushayran and Nahawand because the student, having already studied Western music theory (!), already knows these structures as the major and minor modes, respectively, of Western music (ibid.:132). (The place of Western music theory in Arab music education is discussed in Section C of Chapter III above). After maqam Rast, he assigns the modes in the following order:

lower secondary school (c.1946:130ff.):
  3rd year: 'Ajam 'Ushayran and Nahawand
  4th year: Bayyati and Hijaz

higher secondary school:
1st year: Saba and Jaharkah
2nd year: Huzam and Hijaz Kar
3rd year: Kurd
4th year: Nawa Athar

The remaining modes, those decreed for studies at higher institutes of music, are presented in the order of ascending tonic pitch (ibid.:142ff.):

GG: Yakah, Farafaza, Shatt 'Araban
AA: Husayni 'Ushayran
BB-b-: 'Iraq, Rahat al-Arwah, Bastah Nikar
C: Suznak, Nakriz, Hijaz Kar Kurd
D: Qarjighar, Husayni
E-b-: Sikah

It is not clear if al-Hifni's curriculum was ever adopted in Egyptian schools. However, it is noteworthy in this regard that al-Hifni was Superintendent of Music for a number of years within the Egyptian government's Ministry of Public Education (*Recueil* 1934:74).

Fahmi follows a similar approach when presenting twenty-six maqamat in his 1965 work, starting "with the easy among them step by step until we reach the hard maqamat" (p.33). He starts with the D-based modes "because of their easiness" (p.56) and then gives the F, E-b-, C, BB-b-, BBb, AA, and GG modes. Fahmi does not explain what makes some modes easier to understand than others.

D. Additional Terms Which Serve to Classify the Maqamat

Musicians and theorists use a number of additional terms and phrases besides those mentioned above when discussing the maqamat. While not commonly used as the basis for systematic classifications, these terms and phrases do serve to isolate various groups of modes and, by so doing, highlight important aspects of the interrelationships among the modes.

1. Ascending vs. Descending Modes

The idea that certain modes should have a descending rather than an ascending progression still exists to some extent in the present day (see Mashaqah's fourth point above; this issue is discussed further in Section I of Chapter X). This distinction is occasionally used as an informal method for stating a simple twofold classification of the maqamat. When this is done, attention is paid to the descending modes since they are considered to be few in number. Jihad Racy calls these "the Muhayyar modes," after maqam Muhayyar which it often understood to have this descending feature (personal communication, 4/86). Among the modes which are often included in this category are Muhayyar, Kirdan, Mahur, Awj, 'Ajam, Hijaz Kar, and Hijaz Kar Kurd. It is also common for modes based on GG (Shatt 'Araban, Farah Faza, etc.) and G (transpositions of C- and D-based modes) to follow a descending progression. [34]

The word Muhayyar also functions as an indicator of descending modes because it is the name for the note d. Thus, renditions of D-based modes which start on or around d rather than D are often designated by adding the word Muhayyar to the mode's common name, e.g., Muhayyar Kurd, Muhayyar Busalik (see D'Erlanger 1949:294 and 299), and Muhayyar Hijaz (see Mahfuz 1964:393 where the song "Qaddu-ka al-Mayyas" is said to be in Muhayyar Hijaz).

It is interesting to note here that modern Turkish music theory uses a three-fold classification of the modes based on the general direction of each mode's melodic unfolding: each mode is designated as either ascending, descending, or ascending-descending (see Signell 1977:50ff.).

2. Root-Position vs. Transposed Modes

It is common for musicians and theorists to conceptualize a separate category for transposed modes as distinct from modes in root position. The latter are referred to with the word aṣlī (original, authentic, fundamental). "Rast al-asli," for example, refers to Rast based on C. In modern Arab theory the word for transposition is taṣwīr. As a group, transposed modes are called al-maqamat al-muṣawwarah (al-Halqah 1964:11) or, more rarely, mutashābihāt (Salah al-Din 1950:104 and others). Individually, these modes are designated by adding the name of the new tonic to the name of the maqam. Thus, Rast transposed to G (Nawa) is called "Rast

ʿalá al-Nawa," "Rāst muṣawwar ʿalá al-Nawā," or simply "Rāst al-Nawā."

3. Compound Modes

In medieval Arab music theory, theorists conceptualized a separate category of modes called murakkabāt (s. murakkabah) literally, "compound" or "composite" modes. Modes in this category were perceived as being formed from elements of two or more other modes. While there is no formal category of compound modes in modern Arab music theory [35], this feature is occasionally mentioned in the present day, serving to isolate a small number of modes which are perceived as being compound. The boundary between compound and non-compound modes, however, is vague because all modes are compound in nature since they are made up of two or more distinct tetrachords. Despite their composite construction, most modes are commonly considered to be single entities.[36] Maqam names often serve as clues as to whether or not a given mode is considered to be compound: modes which are conceptualized as single entities are usually given single-unit names; those which are understood to be compound often have binary names which reflect this status. For example, names such as Saba Kurd, Shahnaz Kurd, or Saba Busalik (see D'Erlanger 1949:294-295 and 298-301) signal that these modes are composed of features of maqam Saba and maqam Kurd, Shahnaz and Kurd, and Saba and Busalik, respectively. There are, however, some modes with single-unit names which are commonly perceived as being compound. Maqam Bastanikar, for example, is usually described as maqam Saba on D followed by a descent to maqam 'Iraq or Rahat al-Arwah on BB-b- (i.e., D E-b- F Gb..., then BB-b- C D...); Zawil combines maqam Rast and Nakriz; Dalanshin combines Rast with Saba on A.

4. "Academic" Modes

Racy notes that many maqamat exist only in the more learned compositional genres (such as samā'iyyāt and basharif) or in the compositions of "scholarly" composers. He calls these the "academic" maqamat; for example, the modes Shatt 'Araban, Hijaz Kar, Nawa Athar, and Nakriz. In contrast, Racy has referred to the most common modes, somewhat facetiously, as "box office" maqamat (UCLA lecture class, 1986). [37]

5. Isolating Modes Which Are Rarely Used

al-Shawwa isolates fourteen modes which he calls "rare/neglected" (muhmalah) (1946:16 and 99). In lessons and interviews, musicians and theorists acknowledge the existence of a large number of rare maqamat, referring to these modes by saying that they "can not stand on their own," that they "must exist within other maqamat," or even that they "are simply not used."

Concluding Comments on Systems of Classification

When the modern period began, the main method for classifying the maqamat was a tonic-pitch classification system. There was also a theoretical emphasis placed on modes created exclusively from notes of the fundamental scale ("fundamental note" modes). Multi-tiered classification systems such as existed in the medieval and late-medieval periods (with a separate category for compound modes) (see Shiloah 1981) were not carried over into the modern period.

Following the introduction of tetrachordal theory and Western notation in the twentieth century, tetrachord- and key signature-based classification systems were devised. The tonic-pitch classification was continued but the number of generally recognized tonic pitches was reduced from eleven or more to just eight. In addition to the three main systems of classification, theorists have mentioned a few systems which have not been widely adopted (those of Shihab al-Din, Jargy, and Mashaqah). There are also a number of basic concepts which serve to create twofold classifications of the maqamat, concepts such as Eastern vs. Western, ascending vs. descending, root-position vs. transposed, and compound vs. non-compound.

NOTES FOR CHAPTER IX

1. Jairazbhoy refers to these as "serial modes" (1971:55).

2. Changes in the tonic concept throughout the modern period are discussed in Chapter X, Section A. In this chapter I do not make a distinction between "tonic" and "finalis" and have translated both <u>qarār</u> ("resting place") and <u>asās</u> ("fundamental note") as "tonic."

In Mashaqah's work the tonic pitch is the finalis for all but eight or nine of the ninety-five modes he discusses (see note 4).

Villoteau, whose work preceded Mashaqah's by a number of decades, also listed the maqamat by ascending tonic pitch but he does not state that this reflects an indigenous conceptual scheme (1826:128-130). He hints at another type of classification when he comments that musicians perform "close to a dozen principal modes and some of their derivates" (ibid.:124) but he does not clarify this statement.

3. Mashaqah's presentation of Zirkulah as based on C# is supported by Villoteau who recorded a mode with a similar name and a similar tonic: Villoteau records a mode called "Zenkla" which is given as having the note C one-third-sharp as tonic (1826:129). Villoteau recognized thirds-of-a-tone rather than quarter-tones.

4. In Mashaqah's work there are eight or nine other modes besides `Ajam, Nahawand Saghir, and Zirkulah which are described as ending on notes other than the tonic to which they are assigned. These eight or nine, all of which end on one of the fundamental notes, seem to be classified by the modes' predominant note rather than by the finalis (see note 1). Mashaqah acknowledges this inconsistency in his classification: When presenting the first of these modes, Sultan `Iraq, a mode which is given as having a BB-b- tonic but which is described as ending on D, Mashaqah remarks,

> It would have been appropriate to put [this mode] with the the modes which rest on Dukah [D] but we have put it here following the practice of the masters of this art. In this manner you will notice other modes which are inconsistent with [the note to which they are assigned]. I inform you that we have placed [these modes] following [the practice] of the masters of this art. ([c.1840] 1899:728).

These modes are Sultan `Iraq and `Iraq Zamzami, given as BB-b- modes which end on D; Nawa, a G mode, given as ending on D though "some stop on G"; al-Husayni al-Masri, an A mode which ends on A, though some end on D; Awj and Awj Hisar, two

B-b- modes, given as ending on BB-b-; Awj Khurasan, another B-b- mode, given as ending on D; Mahur, a c mode, given as ending on C; and lastly, the c-based mode, Kardani Ghazali, given as ending with the movements of maqam Bayyati, suggesting that it ends on the note D rather than c (1899:728ff.).

5. Berner (1937:13) argues that al-Khula'i's presentation of modes based on BBb represents a weakening of the boundaries which separated the fundamental notes from the non-fundamental notes in Mashaqah's work.

6. al-Sabbagh also presents Nishabur as ending on the note E (1950:51).

In all, modern-period theorists collectively have mentioned the following fifteen notes as tonic pitches: GG, AA, BBb, BB-b-, C, C#, D, E-b-, E, F, G, A, Bb, B-b- and c. Mashaqah's description of maqam Nahawand Saghir might present an example of a sixteenth: the mode seems to mode based on F#.

7. The documentation of Husayni's shift from A to D is as follows: Villoteau describes Husayni as based on A one-third-flat (1826:129). Mashaqah includes a maqam Husayni among the D modes ([c.1840] 1899:886) but gives a mode called al-Husayni al-Masri (literally, the Egyptian Husayni) as his only example of an A mode. In his comments on the latter mode he says that it closes on A though "some [musicians] return to Dukah [the note D] and stop on it" (ibid.:931). al-Khula'i, writing in 1904, describes two kinds of maqam Husayni (p.44-45). The first is based on AA; the second is given as having its tonic on A with the following qualification: "But most of the Egyptian compositions, old and new, in this maqam are based on Dukah [the note D]." With the exception of Farah (1974:85), who presents Husayni as being based on AA, all writers after al-Khula'i consider maqam Husayni to be based on D.

8. D'Erlanger allows at least one exception to the lower tetrachord being the criterion for determining a mode's *faṣīlah* affiliation: the mode Awj Ara (BB-b- C D# E-b-...) is assigned to the 'Iraq *faṣīlah*. The 'Iraq trichord has D natural rather than D#: BB-b- C D.

It is surprising that D'Erlanger does not mention the *faṣīlah* system of classification in his 1949 publication. In this later work he includes only a presentation of the maqamat grouped by tonic pitch.

9. It is likely that al-Hilu has copied this passage from an uncited source. This is suggested by the repeated occurrence of the word *lahn* to mean "mode," a usage which al-Hilu does not employ elsewhere in his work.

10. Many modes do have a characteristic accidental which enters into their lower tetrachord (see Chapter X, Section H). Occurrences of these accidentals are not considered modulations.

The members of the first ḥalqah likened the grouping of modes which share the same lower tetrachord to the Western practice of allowing two forms of the minor scale. The harmonic minor and melodic minor scales share the same lower tetrachord but differ in their upper tetrachords (al-Halqah 1964:17). al-Faruqi takes objection to this, saying that the decision to base the faṣīlah system on the lower tetrachord "seems to be a decision based solely on convenience rather than on an awareness of the individuality and separate existence enjoyed by each jins of a maqam. The analogy to the minor scale, whose tetrachords have little if any separate identity, can only cloud the true nature of the maqam practice" (1974:97). However, al-Faruqi does not consider the "unstable" nature of the upper tetrachord in Arab music practice, a factor which offers substantial support for the faṣīlah system of classification.

11. Students in first-year theory classes must know the basic principles of the faṣīlah classification system for their end-of-the-year examination. They must be ready to identify the different faṣā'il and a number of the maqamat which fit into each faṣīlah.

12. Those who consider that Nahawand and Nawa Athar share the same key signature do so because they confine themselves to the use of Western key signatures. According to the principles of Western music, the Ab needed for Nahawand and Nawa Athar can only appear in a key signature of three flats, i.e., Bb, Eb, and Ab. This then is Nahawand and Nawa Athar's shared key signature. According to this approach, the B natural needed for maqam Nahawand and the F# needed for Nawa Athar do not appear in the key signature; rather, they have to be entered into the transcription whenever needed. (Key signatures are discussed further in Section N of Chapter X.)

13. Duplicates can also occur from a lack of critical thinking. al-Hilu, for example, assigns maqam Nawa Athar to the Hisar faṣīlah and maqam Hisar tn the Nawa Athar faṣīlah. The Nawa Athar tetrachord, C D Eb F# G, is occasionally called Hisar when it occurs on D, but there is no justification for placing each of these two modes in the other's faṣīlah. On top of this, he gives maqam Nakriz as the only member of a separate Nakriz faṣīlah (all three share the same initial pentachord, 1 2 3b 4# 5).

14. In a discussion of modes and tetrachords which are no longer used in the modern period, al-Hilu describes nine rare faṣā'il and lists a number of modes that belong to each (1972:83-84).

15. The standard nine [and eleven] faṣā'il are Rast, Bayati, Sikah, Saba, `Ajam, Nahawand, Kurd, Nawa Athar, Hijaz [Huzam], and [`Iraq] (see the introductory pages of Chapter VI). The following theorists include other than the standard nine or eleven faṣā'il:

al-Hitama (1983):
7: the standard 9 minus Nawa Athar and Saba (the `Ajam faṣīlah is called Jaharkah)

Salah al-Din (al-Halqah 1964:21):
8: the standard 9 minus Nawa Athar

Touma (1977:41ff.)
8: the standard 9 minus Saba (the Nawa Athar "genre" is called Nakriz (my spelling).

al-Sabbagh (1950:41ff.):
9: the standard 11 minus Nawa Athar and Sikah

al-Hilu (1972:94ff.):
13: the standard 11 minus Huzam, plus Nakriz, Hisar, and Awj Ara (the Nahawand faṣīlah is called Busalik)

Qasis (n.d.:192ff.):
13: the standard 11 minus Huzam, plus Jaharkah, Busalik, and Musta`ar (the Nawa Athar faṣīlah is called Nakriz)

Kamil (1975:49ff.):
14: the standard 11 minus Huzam, plus Jaharkah, Busalik, Musta`ar, and Hijaz Kar

D'Erlanger (1933:182ff.)
15: the standard 11 minus Huzam, plus Jaharkah, Busalik, Musta`ar, Nishabur, and Sazkar

16. Shiloah notes that Safi al-Din's (d.1294) classification system served a similar function: "The greatness of Safi al-Din's theory lies in its codification and conceptualization of essential elements observed in practice as well as its establishment of a classification that distinguishes between the principal and secondary modes, that is, between the most favored ones and the general category of [less-used modes which were 'designated by the general name

murakkabāt']" (1981:33-34).

By the beginning of the modern period Arab music theory had discarded the classification of modes into primary and secondary categories (al-Hilu 1972:87). (See, however, Shihab al-Din's classification, discussed below.) Instead, we find Mashaqah and others simply listing the modes by tonic pitch. In the twentieth century many came to feel that such tonic-pitch presentations were unwieldy and even bewildering, in part, because they offered no indication as to which were the main modes and which were the rare modes. This led to calls for a simplification and consolidation of the Arab system of modes (by Amin al-Dik at the 1932 Congress, by al-Hifni, al-Sabbagh, members of the second *halqah*, al-Hilu, and others; see *Recueil* 1934:139 and Chapter VII.D above). The *faṣīlah* system of classification was readily adopted, in part, because it was seen as providing a response to these calls.

17. In a variation of the terminology commonly used to describe the *faṣīlah* system, `Arafah (1976:21) and Surur (1986:120) also refer to the modes in each family as *faṣā'il*. Surur thus equates the phrase "maqam Rast and its *faṣā'il*" (*maqām al-Rāst wa faṣā'iluhu*) with "maqam Rast and its *furū`*" (*maqām al-Rāst wa furū`uhu*) (personal communication, 5/15/87). It is more common, however, to use *faṣā'il* to refer, not to the modes within a single group (*faṣīlah*), but rather to the groups themselves.

18. Muhammad points out that if the modes in this second group share the same upper tetrachord and the same manner of joining of the tetrachords (*jam`*, i.e., either conjunct, disjunct, or overlapping) as the fundamental mode, then they are exact transpositions of the fundamental mode

19. Jaharkah is not given its own *faṣīlah*. This is, in part, attributable to the fact that al-Sabbagh includes a separate `Ajam *faṣīlah*. Both Jaharkah (F G A Bb ...) and `Ajam (BBb C D Eb ...) share the same 1 2 3 4 structure for their initial tetrachord.

20. al-Sabbagh's category of "technical" modes seems to have its parallel in the *shu`ab* or *murakkabāt* of medieval Arab classification systems. Shiloah writes, "Certain descriptions of the *shu`ab* (or *murakkabāt*) imply that they are not complete or independent modes, but rather serve towards the elaboration of the principal modes with which they have affiliations" (1981:37).

21. In his 1964 article Salah al-Din calls the Rast and Bayyati key signatures "the two Arab *dalīls*" (*dalīlān `arabiyyān*). He calls the `Ajam and Nahawand key signatures "the two *dalīls* from Western music" (p.23).

22. In his writings Salah al-Din presents both the fasīlah and key-signature systems of classification. He recognizes, for example, that maqam Hussayni belongs to the Bayyati fasīlah (1950:113; c.1950:54) but he adds that for simplification of transcription in Western notation he uses the dalīl of Rast and starts from Rast's second degree.

For a number of modes there is an element of choice as to which of the four key signatures to use. Maqam Husayni, for example, can be derived from the second degree of the Rast key signature without the need for any additional accidental signs, or from the first degree of the Bayyati key signature in which case B-b- accidentals are needed throughout the transcription. Recognizing this point, Salah al-Din has included a number of modes in more than one key signature (see 1950:113-14 and 135 where Husayni is included in the Rast and Bayyati key signatures).

23. In his Taswir al-Alhan al-'Arabiyyah Salah al-Din teaches how to transpose the modes and the four key signatures to different scalar degrees).

24. In his [1948] c.1950 book and in the halqah publication, Salah al-Din modifies his key signature theories in a number of ways. In the former he acknowledges that the Ajam and Nahawand key signatures are mutually derivable; for example, the 'Ajam key signature of two flats--Bb and Eb--is the same as the Nahawand key signature when Nahawand is transposed from C to G. Therefore, he states that it is possible to recognize only three key signatures (p.44-45). In the halqah publication he reduces this number to two, i.e., the signature of the major mode (al-maqām al-kabīr) for those modes free from three-quarter-step intervals, and the signature of maqam Rast for those modes with three-quarter-step intervals (al-Halqah 1964:25ff.).

In the halqah publication (ibid.:19-22) he also assigns a single derived maqam to each of his four fundamental modes and then uses this group of eight modes as the basis for an eight-fold fasīlah system (see Section 2.b above). Maqam Sikah is derived from the third of maqam Rast; Saba is derived from the tonic of Bayyati with the addition of Gb and db accidentals; Kurd is derived from the third of maqam 'Ajam 'Ushayran; and finally, Hijaz is derived from the fifth of Nahawand transposed to GG with the addition of B-b- accidentals when needed.

Rast:	C	D	E-b-	F	G	A	B-b-	c		
Sikah:			E-b-	F	G	A	B-b-	c	d	e-b-
Bayyati:	D	E-b-	F	G	A	Bb	c	d		
Saba:	D	E-b-	F	Gb	A	Bb	c	db		

ʻAjam:	BBb	C	D	Eb	F	G	A	Bb		
Kurd:			D	Eb	F	G	A	Bb	c	d

Nahawand on GG:	GG	AA	BBb	C	D	Eb	F#	G				
Hijaz:					D	Eb	F#	G	A	Bb(B-b-)	c	d

25. According to the *faṣīlah* system of classification, the modes in A.1 belong to the Rast *faṣīlah*, those in A.2 belong to the Bayyati and Saba *faṣā'il*, and those in A.3 belong to the Sikah, Huzam, and ʻIraq *faṣā'il*.

26. According to the *faṣīlah* system of classification, the modes in B.1.a. belong to the ʻAjam *faṣīlah*, those in B.1.b belong to the Kurd *faṣīlah*, those in B.2.a. belong to the Nahawand and Nawa Athar *faṣā'il*, and those in B.2.b belong in the Hijaz *faṣīlah*.

27. In terms of the *faṣīlah* system of classification, Mashʻal has recognized six separate *faṣā'il*, i.e., ʻAjam, Rast, Nahawand, Kurd, Bayyati, and Sikah. The three which are missing from the "standard nine" are Nawa Athar, which is included within the Nahawand group of modes, Hijaz, which is included within the Kurd group of modes, and Saba, which is included within the Bayyati group.

28. This individual acknowledges that many of these modes can have variant key signatures. For example, Huzam can have a key signature of B natural, E-b- and Ab; Nawa Athar can have a key signature of B natural, Eb, Ab, and F#; and Saba can have a key signature of Bb, E-b-, and Gb.

29. al-Khulaʻi (1904:37-38) quotes this passage virtually verbatim, changing only the spelling of the word *Rast* to *Rāst* (the latter spelling is standard in the present day) and substituting the word *naghamah* for every instance of Mashaqah's *burj*.

30. The two modes Husayni (sharing the name of the note A) and Muhayyar (the name of the note d) are said to be based on D; Buzrak, sharing the name of the note e-b-, is said to be based on E-b-; Mahuran, "named after" the note f, is based on F; and Ramal Tuti, "named after" the note g, is based on c. Although Husayni is not based on A, Mashaqah describes a mode called al-Husayni al-Masri (the Egyptian Husayni) which is based on A, "although some [descend] to D and stop there" (1899:931).

"Named after" is put in quotes because in most cases the notes were probably named after the modes and not the other way around.

31.The four which use only the fundamental notes are ʿIraq, Rast, Sikah (except that Egyptians used Ab instead of A), and Muhayyar. While maqam Husayni is said to use the note F# (Hijaz), al-Husayni al-Masri also uses only the fundamental notes and might thus be considered a fifth such mode.

32. Although the idea of a specific starting note is not mentioned in present-day Arab theory, improvisations in maqam Saba today are commonly begun by focusing on the note F, thus offering an important example of continuity in the performance practice over the last 150 years.

33. Mashaqah also shows a strong bias towards modes built exclusively on the notes of the fundamental scale by repeatedly pointing out instances where a given mode should best be transposed to a different pitch than that to which it is normally assigned so as to alleviate the need for non-fundamental notes. For example, after describing the mode Shawark Masri as "A distinctly, G obscurely, F=/= and E distinctly, then D C", Mashaqah comments, "it would be better if it were [built on the note] Jaharkah ..." (ibid.:731) for then the notes would be d c B-b- A G and F, i.e., all fundamental-scale degrees. Despite Mashaqah's repeated turning to this line of reasoning, it is clear that the idea was not so strongly imbedded in the music culture so as to have prevented the many modes he is discussing from being in positions which require non-fundamental notes.

34. In the case of G-based modes, a descending progression results, in large part, because half of the available notes lie below the tonic: Arab music generally uses a two-octave range, from GG to g. When playing a G-based mode a musician will seldom ascend to the upper octave as that would be mean playing in the region above the note g. Thus, after presenting the first octave (G to g) it is common to descend and show the mode in the lower octave (from GG to G).

A review of Mashaqah's descriptions of the individual modes reveals that all four of his GG modes, all three of his AA modes and a number of his BB-b- modes have descending progressions, thus suggesting that the modes based in the lower range of the general scale are also prone to this feature ([c.1840] 1899:727-729).

35. al-Hilu notes the absence of a special category for compound modes in twentieth-century Arab theory (1972:87).

36. The vagueness of the boundary between compound and non-compound modes was noted by medieval Arab theorists. See Shiloah 1981:33 and Wright 1978:129.

37. Racy acknowledges that he first heard of this usage from Mimi Spencer.

CHAPTER X: THE VARIOUS ELEMENTS WHICH ENTER INTO THE DEFINITION OF THE INDIVIDUAL MAQAMAT

A. THE CONCEPT OF TONIC

The concept of tonic has been recognized throughout the modern period as an essential feature in the definition of the Arab modes. While certain aspects of the definition and functions of the tonic note have remained the same throughout the period, there have also been significant changes. These changes are reflected in a change in the main Arabic word for tonic: at the beginning of the period the tonic was called the qarār (the resting place); today it is most commonly called the asās (the fundamental or principal note).

One point of continuity throughout the period is that the tonic, with few exceptions, has been "the note on which the mode rests" or ends (Mashaqah [c.1840] 1899:300). This is tonic as "finalis." Supporting this understanding, the Committee on Mode, Rhythm, and Composition at the 1932 Congress adopted the statement, "It is necessary, in the end, to finish on he tonic of the mode employed" (Recueil 1934:135; see similar statements in Ronzevalle 1899:300 n.1, al-Khula'i 1904:37 n.1 who includes an edited version of Ronzevalle's footnote, al-Shawwa 1946:96, D'Erlanger 1949:105, and al-Faruqi 1974:98). [1]

At the beginning of the modern period, the primary function of the tonic was to act as finalis. In recognition of this function the main Arabic word for tonic was *qarar*, i.e., the "resting place" (Mashaqah [c.1840] 1899:726ff.; *Kitab Mu'tamar* 1933:135; al-Shawwa 1946:17; D'Erlanger 1949:106; Qasis n.d.:177; Powers 1980:427; Pacholczyk 1980:522). There are also two other words based on the same root (q r r) which have been used to name the tonic name. (The root gives a meaning of "to settle down, establish oneself, come to rest.") These are *mustaqarr* or *mustaqarr al-maqam* (resting place) (al-Hilu 1972:78) and *darajat al-istiqrār* (the note of repose) (al-Hifni 1948:155; Kamil 1975:48).

A second point of continuity throughout the period is that the tonic note has served to anchor the modes within the overall two-octave gamut. Modes do not occur randomly within the general scale; each mode has a predetermined position, a "root" position (*tabaqah asliyyah* or *darajah asliyyah*) which is articulated by naming the mode's tonic note. This has given rise to the system of classifying the modes by tonic pitch. Mashaqah (ibid.:727ff.), for example, presents "the modes whose tonic [*qarār*] is the note Yakah [GG]," then "the modes whose tonic is the note 'Ushayran [AA]," etc. See 'Arafah and 'Ali (1984:23-25) for a recent example of this practice.

After the modes came to be conceptualized as scalar entities (probably in the late-nineteenth century; see the following section on scale), the tonic took on additional meanings and functions. For one, the tonic came to be perceived as the lowest note of a mode's central octave (see D'Erlanger 1949:107; al-Faruqi 1974:98). [2] For the vast majority of maqamat this new understanding could be applied without necessitating a change in the note which is considered the tonic. Rast's central octave, for example, is C D E-b- F G A B-b- c; therefore, its tonic is C.

For some modes, however, this new definition resulted in a change in the note considered to be the tonic. The most prominent of these are a small number of modes in which the highest note of the central octave was previously thought to be the tonic. For example, today maqam `Ajam is generally described as having the scale BBb C D Eb F G A Bb. In performance `Ajam is not played extensively; it is common to modulate to `Ajam and play the mode briefly in the following fashion: one enters the mode from Bb, then descends to BBb, and then concludes the statement of the mode by returning to Bb (see, for example, the third <u>khānah</u> of <u>samā'ī</u> Bayyati by Ibrahim al-`Aryan). The mode's finalis, then, is Bb. This led Mashaqah to present the mode as having a Bb tonic ([c.1840] 1899:932). (It should be noted that the mode's name is also the name of the note Bb.) Present-day theorists, not considering the importance and function of the Bb in practice, commonly declare that the mode's tonic is BBb rather than Bb, following the reasoning that the tonic is the lowest note of a mode's central octave. In such cases the present-day understanding is best seen as a simplification for the sake of presenting a uniform music theory.

A second change which followed the application of scalar theory to the definition of the modes was that the tonic gained in importance so that it came to be perceived, in the present-day theory, as the principal note of nearly every mode. This is a departure from the understanding which existed in the early and middle subperiods where the finalis of many modes received little or no emphasis until the final cadence of a piece or improvisation. One result of the tonic's newly gained prominence has been that many of these modes came to be reinterpreted in the present day. I offer one example here: According to middle-period theory, maqam Hijaz Kar (C Db E F G Ab B c) begins at the octave. The melodic line then descends slowly until one reaches the first note of the scale at roughly the same time that one reaches the final cadence (see D'Erlanger 1933:259; al-Shawwa 1946:56; al-Hilu [1961] 1972:112). That is to say, Hijaz Kar was a "descending" mode. In the present day, however, students at the main Cairo conservatories are taught that, when improvising, one should begin all modes at the tonic and then ascend up the scale, Hijaz Kar included. In other words, the new importance given to the tonic note has tended to transform "descending" modes so that they are now all conceived as requiring an ascending progression. (This point is discussed further below in Section I on starting notes and Section J on specific paths for performance.)

The new understanding about the importance of the tonic note came to be reflected by a change in the main Arabic word for tonic. The tonic came to be called the *asās*, *asās al-maqām*, or *asās al-naghamah*, i.e., the "fundamental" or "principal" note of the mode (*Rawdat al-Balabil* 1921:159; *Kitab Mu'tamar* 1933:135; Salah al-Din 1950:115; al-Hilu 1972:68; Qasis n.d.:211; and common in present-day Cairo). Using the same root (a s s), the tonic is also called the *darajah asāsiyyah* (al-Hifni 1946:142) or the *sawt asāsī* (al-Shawwa 1946:96), both having the meaning of "fundamental" or "principal" note.

The shift from *qarār* to *asās* is evident in the literature and in present-day Cairo. Mashaqah (c.1840) uses only *qarār*. The two are used interchangeably in the 1932 Congress publication (see *Recueil* 1933:135) and in al-Shawwa (1946:96 and 97). In Cairo today, many musicians and theorists use only *asās* for tonic and deny that *qarār* can also be used as a synonym. (*Qarār* is used as a relative term to refer to the lower octave of any note; e.g., BBb is the *qarār* of Bb. The plural, *qarārāt*, is used to refer to the notes below a mode's central octave; for example, Rast's *qarārāt* are GG, AA, BB-b-, and possibly C [George Michel, personal communication 10/13/82; Qadri Surur, personal communication 6/22/87]).

In the present day the tonic is also named using a third root (r k z) which gives the meaning, "to set up, fix, embed firmly." Using this root the tonic note is called the rukuz or darajat al-rukūz, i.e., the note of "centering"/"fixation" (Salah al-Din 1950:122; al-Halqah 1964:12; Kamil 1975:48; Muhammad 1984:32).

Throughout the period there have been a small number of modes which have stood as exceptions to the prevailing method for determining the tonic note. In these modes, the note which is perceived as the predominant note is neither the finalis nor the lowest note of the mode's central octave; thus, there is a tension in the music theory between the predominant note and the note which should, according to the prevailing definition, be called the tonic. Mashaqah includes eight or nine such modes among the ninety-five he discusses. Awj, for example, is presented as having a B-b- tonic despite the fact that it is described as descending and ending on BB-b- ([c.1840] 1899:931). Similarly, Mahur is given as having the note c as tonic despite the fact that it is said to descend and end on C (ibid.:932). Mashaqah acknowledges that these modes are exceptions to his otherwise consistent approach to the issue of tonic pitch, i.e., in all other cases he considered the finalis to be the tonic (see note 4 in Chapter IX above). Two other examples which are occasionally mentioned in the present day are Kirdan and Muhayyar. According to today's theory, Kirdan's tonic is C, Muhayyar's is D. These are also the notes on which these modes usually end in practice. However, the predominant notes of these modes are commonly recognized as c and d, respectively. Present-day theorists, including Surur (personal communication 6/8/87) and al-Kurdi (6/7/87), acknowledge that these modes tend to contradict the standard understanding today that the tonic is not only a mode's predominant note but also the finalis and the lowest note of a mode's central octave. In the case of the maqamat Awj, Mahur, Kirdan, and Muhayyar, the contradiction is especially apparent since these four maqam names are also the names of the notes which are perceived to be predominant in each maqam; there are the octave note in each case. Awj is B-b-, Mahur in Mashaqah's time was c (today it is B), Kirdan is c today, and Muhayyar is d. As with maqam 'Ajam (discussed above), the present-day understanding about the tonic of these modes (i.e., the lowest note of their octave scales) is best seen as a simplification for the sake of presenting a uniform music theory. [3]

Awj (B-b-): BB-b- C D E-b- F G A B-b-
Mahur (c): C D E-b- F G A B-b- (or B) c
Kirdan (c): C D E-b- F G A B-b- c
Muhayyar (d): D E-b- F G A B-b- c d

Powers (1980:427) questions the use of the term "tonic" when one is discussing the Arab modes: "The term 'tonic' normally implies that the degree in question has some sort of pitch-related governance over other degrees, a governance that goes beyond mere weight of recurrence ('predominance') or temporal position ('finality')." Although this point is not addressed in the literature, there is evidence that pitch-related governance is another function of the tonic in Arab music. I offer two examples. First, the modes Rast and Bayyati are recognized as using the same set of notes (... C D E-b- F G A, Bb and B-b-, c d ...); Rast's tonic is C, Bayyati's is D. Musicians, however, commonly state that note E-b- is tuned higher in Rast than in Bayyati. Although the reason for this is not fully understood, it is assumed that the different intonation is largely the result of the different tonics. Second, in maqam Huzam (E-b- F G Ab B c d e-b-), musicians often acknowledge a special tuning for the notes Ab and B (the former is raised, the latter lowered) "as if," in the words of one Cairo musician, "we were trying to create a perfect fourth and a perfect fifth from the tonic E-b-" (Faruq al-Babili, personal communication 1/83).

In summary, the tonic in Arab music serves to anchor a mode within the overall two-octave gamut and is thus the basis for the predominant system for classifying the maqamat. It is usually the last note of a piece (the finalis) and plays an important role in governing the intonation of other notes in the maqam. With the introduction of scalar theory, there was a shift in the meanings and functions of the tonic pitch. Now perceived as the lowest note of a mode's central octave, tonic notes above G are commonly rejected. In addition, the importance of the tonic pitch grew so that this note is now, with few exceptions, understood to be a mode's predominant note. In accordance with this new understanding, students are taught in Cairo today that improvisations usually start in the tonic region. For some modes (especially those which were previously considered to be descending modes), this has meant that their definitions have been significantly altered.

NOTES FOR CHAPTER X, SECTION A

1. This rule is still followed in the present day. A composer or improviser is, however, free to create a piece which is an exception to this rule. Notable exceptions include the song "al-Aṭlāl" composed by Riyad al-Sanbati for the singer Umm Kalthum: the song is in maqam Rahat al-Arwah whose tonic is BB-b- but the song ends in the octave on B-b-; Muhammad `Abd al-Wahhab's instrumental composition "Bint al-Balad," which is set in maqam Bayyati but ends on d rather than the tonic D; and "dūlāb Bayyati" (see D'Erlanger 1959:489), also in Bayyati, also ending on d.

2. This explains, in part, why the notes above G are no longer commonly recognized as tonic notes (see Chapter IX, Section B). With Arab music's two-octave scale from GG to g, modes based above G would not have a full octave above the tonic note. Thus, Mashaqah's categories of modes based on A, B-b-, and c are not recognized in most twentieth-century theory books.

3. The roots of the present-day simplification are already present in Mashaqah's work when he refuses to recognize any tonic pitches above the note c (his eleven categories of tonic notes are GG, AA, BB-b-, C, D, E-b-, F, G, A, B-b-, and c). For example, Mashaqah describes the mode Muhayyar (Muhayyar is also the name of the note d) as starting on d and focusing on this note before descending and closing on D. The note d seems to be the predominant note; thus, we might expect that Mashaqah would classify Muhayyar as a d-based mode. He had, after all, followed this line of reasoning when he presented Awj as a B-b- mode and Mahur as a c-based mode. However, because he does not include a category of d-based modes, he has had to group Muhayyar with the D modes. The same argument can be made concerning his classification of the maqamat Buzrak, Mahuran, and Ramal Tuti, modes which are "named after" the notes e-b-, f, and g, respectively. Mashaqah classifies Buzrak with the E-b- modes, Mahuran with the F modes, and Ramal Tuti with the c modes. Thus, we see that Mashaqah too has simplified matters, but on a less restricted basis than occurs in the present day, i.e., he allowed for modes based on G, A, B-b-, and c while these tonics are not generally recognized in the today's theory.

B. THE CONCEPT OF SCALE

Although the concept of scale has existed throughout the modern period in the Middle East, it seems that the concept was not applied to the definition of the maqamat until the late-nineteenth century. In the twentieth century scale became the single most important element in the definition of the individual modes to the extent that some present-day performers and theorists now consider maqam to be synonymous with scale.[1] The various stages in the adoption of the concept of scale are discussed in the following pages and are illustrated by examples in a chart given at the end of this section.

At the beginning of the modern period, the modes were not conceieved as containing a series of notes that could be presented in a simple ascending or descending progression (C D E-b- F G A B-b- c, for example). In Mashaqah (c.1840), for example, each mode is defined by giving one or more melodic phrases which typified the character of that mode (see example #1 in the chart below; see also Appendix 1). Similar presentations are found in a 1863-64 work by the Turkish writer Hashim Bey, Majmu'at al-Maqamat, printed in Constantinople. [2] According to the comments of two Western scholars, this perception of the modes as melodic-types rather than scales continued well into the twentieth century. Rouanet writes (1922:2756), "The notion of scale is unknown to musicians free from any contact with Europe. If one asks them to play the scale of a mode ... they invariably play a theme, a fragment of a piece." [3] D'Erlanger (d.1932) comments that "... Arab musicians seem to ignore the notion of scale in the sense that the European musician gives to it: when one asks them to play the scale of one or another of their modes, they prefer rather to play a theme in which they put in relief all the melodic particulars of that mode, notably its modulations" (1949:104).

It is in the late-nineteenth- and early-twentieth-century sources that we first find the modes defined in terms of scales. Moustapha, for example, in an 1887 article written in French, discusses the size of the intervals found in the scales (gammes) of five modes. Scalar presentations of all the main modes appear in Dhakir Bey's Tuhfat al-Maw'ud fi Ta'lim al-'Ud and al-Khula'i's al-Musiqa al-Sharqi, both published in Cairo, in 1903 and 1904, respectively. In these works, the scales are presented in simple ascending progression (see example #2 in the chart below).

There is evidence to suggest that these three writers were all influenced in their presentations of the modes by the Western concept of scale. Moustapha, for one, was writing in French, used the French word gamme, and had read Villoteau's work, also in French. Dhakir was educated at one of the military music schools established in Egypt in the 1820s and 1830s by Muhammad 'Ali (Shawqi 1969:7). These schools taught Western music theory and performance; thus, Dhakir was undoubtably well conversant in the Western concepts of the major and minor scales. al-Khula`i (ibid.:41ff.), in his discussion of the individual modes, often adds (without explanation) what he apparently felt to be the Western scale which most closely approximates the Arab maqam he was discussing. For example, after defining maqam Suznak (C D E-b- F G ...) he adds "Sol majeur"; after describing Nawa Athar (C D Eb F# G ...) he adds "Sol mineur"; after describing Bayyati (D E-b- F G ...) he adds "La mineur," etc.

Starting, in our sources, with the *Rawdat al-Balabil*, edited by Iskandar Shalfun (1921:159), a new development appears: it becomes common to conceptualize the modes as containing separate ascending and descending scales. The two scales serve to indicate instances where a note changes from flat to half-flat (and vice versa) or from flat to natural (and vice versa) in response to the direction of a mode's melodic movement. Modes Rast and Bayyati, for example, use B-b- in ascent but Bb in descent. Thus, their ascending and descending scales are often presented as follows:

Rast:	C D E-b- F G A *B-b-* c	c *Bb* A G F E-b- D C
Bayyati:	D E-b- F G A *B-b-* c d	d c *Bb* A G F E-b- D

This approach received considerable support when it was used in the two reports on the Arab modes within the 1932 Congress publication (one by D'Erlanger, the other by the Institute of Oriental Music, Cairo). It is still widely used today (see al-Shawwa 1946:17ff; 'Arafah and 'Ali [1942] 1978:23-25; D'Erlanger 1949:118ff.; Fatah Allah and Kamil 1982:13-16; Touma 1977:41ff.; Racy 1983:131; etc.). Shalfun, D'Erlanger (Kitab Mu'tamar 1933:182ff.), and al-Shawwa (1946:17ff.) present the two scales by writing out the Arabic note names in vertically arranged columns (see example #3 on the chart below). It later became standard to present the ascending and descending scales on Western notation (see, example #4 on this same chart; see also the report of the Institute of Oriental Music within the 1932 Congress publication, Recueil 1934:530ff.; 'Arafah and 'Ali [1942] 1978:23-25; etc.).

Recently in Cairo there has been a move back to assigning each mode a single ascending scale. Salah al-Din comments on one of the reasons for this approach:

> [Separate ascending and descending presentations of the modes] increases the complexity of our Arab maqamat. The task of this book is the simplification of the rules of Arab music; thus, we have sufficed to record [only ascending scales] for all the maqamat. (1950:176)

Analysis in terms of a single ascending scale goes hand in hand with the new faṣīlah system of modal classification in which each and every variant scale is separately named and assigned to a specific family of modes (faṣīlah). Rast with B-b-, for example, is called Rast; with Bb it is called

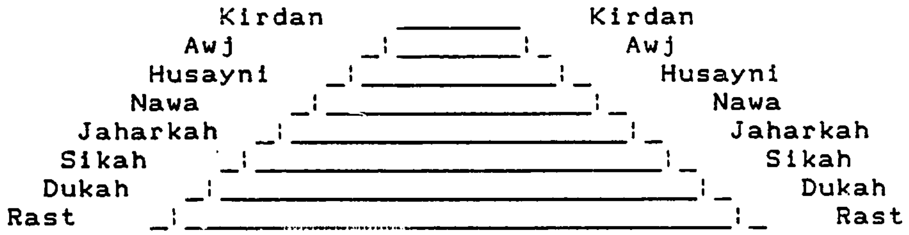
Suzdilar; both belong to the Rast *faṣīlah*. Bayyati with B-b- is called Husayni; with Bb it is called Bayyati. According to this approach, "scale" is synonymous with "maqam." A given mode can be further defined--one can, for example, discuss tetrachordal structure, discuss the relative importance of the various notes, or indicate notes which are tuned a little higher or lower than normal--however, a scale is, in all but a few cases, sufficient to identify and define a mode. [4] Works which follow this single-ascending-scale approach include Salah al-Din (1950), Muhammad (1984) and Surur (1986). Muhammad's book is presently used in the Cairo conservatories as a textbook for music theory classes.

The adoption of the concept of scale has not been confined to the realm of music theory. Musicians, especially those trained in music institutes, now commonly conceptualize the maqamat as scalar entities. The observations of Rouanet and D'Erlanger, that "the notion of scale is unknown to musicians" or that musicians will not perform a mode's scale, even when asked to do so, are no longer true in the present day.

In keeping with the absence of the concept of scale as applied to the individual modes at the beginning of the modern period, there was no term at that time with the modern-day meaning of "scale." Mashaqah ([c.1840] 1899:219) and Shihab al-Din ([c.1840] 1892:11) refer to the seven fundamental notes as comprising a dīwān or martabah. These terms refer to a "group," a "collection," or a "class" of notes. They do not refer to the fact that the notes occur one after the other in linear succession.

Mashaqah acknowledges the linear aspect of the notes when he writes that "the seven fundamental notes [abrāj] ... are like a ladder [ka-sullam], one step above the other ..." (ibid.:220). This same line appears again in al-Khula'i's work (1904:29). By way of clarification, al-Khula'i adds a diagram labeled "the Arab sullam" in which the seven-plus-one degrees of the fundamental scale are represented graphically as ascending and descending steps in a "step-pyramid"-type structure:

the Arab sullam



In time, the word sullam (literally "ladder, stairs") was adopted as the term for "scale." Today, sullam is universally accepted in this capacity. Note that the word first appeared in our sources in the Mashaqah passage quoted above, but there it was used to offer an analogy--it was not an established term. al-Khula'i's diagram suggests that the word sullam still carried the primary meaning of "ladder, stairs" at the beginning of the twentieth century and that it was not yet recognized as a musical term at that time. Sullam finally occurs as a recognized term in Rawdat al-Balabil (1921:159) and al-Hifni ([1938] c.1950:121).

The appearance of the term, sullam, is important in two respects. First, it undoubtably served to isolate and emphasize the concept of scale within theoretical thinking. Second, it suggests a degree of Western influence in affirming the concept on an explicit level. This is because sullam can be seen as a direct translation of one of the French words for "scale," échelle, which also means "ladder." (The position of Western music in the region during the nineteenth and early-twentieth centuries is discussed in Chapter I.)

In summary, although absent from the earliest modern period descriptions of the individual modes the concept of scale is now the principal element in the definition of the maqamat for theorists and performers alike. The coining of a new term, sullam, stands as recognition of the new-found importance of the concept in modern Arab music theory.

Examples Showing Different Stages in the Application of the Concept of Scale within Presentations of Maqam Rast

1. Mashaqah ([c.1840] 1913:90):

It is that you strike the note Rast, then Dukah and in this manner you ascend to Nawa, then return to Rast, then you strike Yakah and then stop on Rast (i.e., C, D, ascend to G, back to C, GG and then C).

2. al-Khula'i (1904:41):

Rast - Dukah - Sikah - Jaharkah - Nawa - Husayni - Nawa - Awj - Kirdan [i.e., C D E-b- F G A B-b- c]. When it is necessary to ascend or descend further than these notes you use the higher and lower octaves of these [same] notes. The settling at the end is on the note Rast.

3. Rawdat al-Balabil (1921:160-161)(adapted):

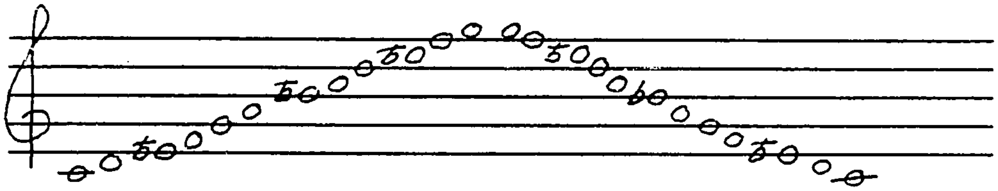
ascent:
Rast [C]
Dukah [D]
Sikah [E-b-]
Jaharkah [F]
Nawa [G]
Husayni [A]
Awj [B-b-]
Kirdan [c]
Muhayyar [d]
jawab Sikah [e-b-]
jawab Jaharkah [f]
jawab Nawa [g]

descent:
jawab Nawa
jawab Jaharkah
jawab Sikah
Muhayyar
Kirdan
Awj
Husayni
Nawa
Jaharkah
Sikah
Dukah
Rast

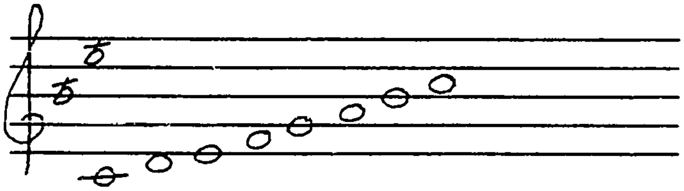
the lower octave:
Rast
'Iraq [BB-b-]
'Ushayran [AA]
Yakah [GG]

returning to the tonic:
Yakah
'Ushayran
'Iraq
Rast

4. The Institute of Oriental Music report within the 1932 Congress publication (Recueil 1934:543)(adapted);



5. Muhammad 1984:22 (adapted);



NOTES FOR CHAPTER X, SECTION B

1. It is evident from a pre-modern work quoted in Villoteau (1826:46ff.) that a scalar presentation of the modes existed prior to the modern period. I am arguing, then, that the concept of scale had to be reintroduced into discussions of the individual modes.

2. My information on Hashim Bey's work is based largely on quotes contained in Fatah Allah 1971:91ff.

Villoteau presents ascending scales for each of the modes he found in Egypt in 1798-1801 with the comment: "we have observed [or notated] the scale [of each mode] at the same time as [the musicians] would play it on their instruments" (1826:127). Based on the evidence in Mashaqah's work and on comments by Villoteau on the lack of theoretical conceptualization by musicians of the period, it seems likely that the scales which Villoteau presented are the result of Villoteau's own analysis of the modes in performance.

Although the concept of scale was not applied to the definitions of the modes in the early period, the concept did occur in discussions of the seven fundamental notes and the twenty-four quarter notes per octave. We find, for example, that Villoteau's Egyptian informants had the concept of a fundamental scale, i.e., a succession of the fundamental notes of Arab music: "They distinguish well, it is true, the different degrees of the diatonic scale of notes by their names [e.g., Rast, Dukah, Sikah, Jaharkah, Nawa, etc.]" (1826:123). Similarly, Mashaqah writes that the seven fundamental notes (abrāj) are situated "one above the other" "like a ladder" ([c.1840] 1899:218 and 220). Indeed, the very existence of the fundamental note names and the names for the twenty-four notes per octave is evidence of an underlying concept of scale. Mashaqah also exhibits an understanding of the concept of scale when he discusses the transposition of the modes Rast and Bayyati to the note G (ibid.:630-631).

3. Rouanet relies heavily on Mashaqah's work when he describes the individual modes (1922:2756ff.). This brings into question the extent of Rouanet's understanding of the modal concept as it existed at the beginning of the twentieth century.

4. Exceptions include the modes Kirdan and Muhayyar when their tonics are said to be C and D, respectively. In such cases they share the same scale and tonic as Rast and Husayni, respectively. The "ambiguity" is avoided if the tonics of Kirdan and Muhayyar are recognized as c and d, respectively.

C. AMBITUS

In the modern literature statements relevant to the concept of modal ambitus appear in two different contexts: first, when defining the concept of "maqam" a few writers include general statements about ambitus without referring to specific modes; second, when defining the individual maqamat writers include information on the ambitus of the specific modes being discussed.

1. General Statements About Modal Ambitus

The concept of ambitus is seldom discussed on an explicit level in modern Arab theory. This is probably because the vast majority of the maqamat are seen as having a single-octave ambitus; when dealing with these modes one does not mention ambitus because it is not an element which distinguishes one mode from another. As for the maqamat which are exceptions to this single-octave norm, they are too few in number to bring the whole question of ambitus to the fore. In keeping with this situation there is no specific Arabic term for "ambitus."

The idea that the modes, with few exceptions, have a single-octave ambitus has existed throughout the modern period. For example, when Mashaqah divided the maqamat (lahn/alhān) into four groups, he isolated within the fourth group the exceptions, i.e., those modes which include "more than seven notes; moreover, [they] use notes from two octaves...." ([c.1840] 1899:302). (This same passage appears with minor editing in al-Khula'i 1904:38; Mashaqah's four-point classification is discussed above in Chapter IX).

This idea is restated in a number of later works. al-Shawwa (1946:13) writes, "Every maqam from the maqamat ([or] the anghām) has its own specific scale [sullam] composed of seven notes and the eighth note which is the octave to the tonic of the maqam (al-jawāb li qarār al-maqām); except that some of them, the construction of their scales exceeds seven notes" (1946:13). Similarly, the members of the 1961-63 Cairo conference decided to consider "each mode on the basis of eight notes from which they are composed, provided that the maqam does not exceed the range of the octave" (al-Halqah 1964:12). [1]

D'Erlanger provides the most thorough statement on the concept of ambitus:

> The essential notes of an Arab melody generally move in the space contained between the modal tonic (qarār) and the first reply at the octave (jawāb) of this note. Many of the modes, however, go beyond the limits of this fundamental octave, be it to the bass register [au grave] or to the upper register [à l'aigu] or to the two directions together. Although the additional notes do not constitute an essential part of the modal scale, the mode at times owes to them a little of its distinctive character.
>
> The notes added at the bass are called qarārāt because of their association with the qarār or tonic; and those which are added above are called jawābāt because of their association with the jawāb or reply to the tonic.
>
> The group of notes which compose the fundamental octave (al-dīwān al-asāsī) and the

> supplementary notes (the qarārāt and jawābāt) constitute that which European musicians call the ambitus or the tessitura of the melody. (1949:100) [2]

Seeking to simplify Arab music theory, recent writers have tended to ignore the exceptions to the single-octave ambitus when defining the concept of maqam: Muhammad, for example, in a textbook used widely in theory classes in Cairo's music institutes (1984:19), writes that a maqam "is a succession of eight notes [naghamāt] ... the eighth note [being] the octave of the first" (1984:19; see also Qasis n.d.:190; Surur 1986:114).

Inherent in the concept of single-octave ambitus (at least, as it is understood in the twentieth century) are three basic assumptions: first, that the essential statement of the mode occurs within a specific single octave (C to c, or D to d, or E-b- to e-b-, for example); second, that the mode can be restated in any available lower or higher octaves (depending on the range of the voice or instrument being used); and third, that statements beyond the central single octave are considered as but repetitions of the melodic potential of the central octave. The single-octave concept, then, does not mean that the performance of a mode is limited to this single-octave range. (See, however, a discussion below of comments in Mashaqah and Villoteau which suggest that range was, in fact, limited in the early period.)

This idea is explicitly stated in only one of the sources for the present study. al-Hilu writes (1972:78),

> The fundamental notes of a maqam from which [the maqam] is composed, their number is eight ... and they are called the fundamental scale or octave of the maqam [*al-sullam aw al-dīwān al-asāsī li al maqām*]. A second octave is added to it which is an upper octave [*jawāban*] to the first for extending the range of the maqam and the freedom of action when composing in it....

al-Hilu adds that the composer is "free to proceed and create ... and ascend until more than two octaves if he wants on the condition that he returns in the end to the tonic of the maqam, whatever the maqam" (ibid.:94 n.1).

2. Ambitus Within Presentations of the Various Maqamat

A second perspective on the issue of modal ambitus is gained by analyzing the presentations of the various maqamat which are found in all the major sources. Such analysis reveals that, although the general stance regarding modal ambitus has been basically the same throughout the modern period (as we have seen above), in fact, the concept of the individual maqam has changed drastically throughout the same period so that we must address the issue of modal ambitus with respect to three subperiods. We will first discuss specifics from the early period, then from the middle period, and finally from the most-recent or present-day period.

Ambitus in the Early Period

The main source for the concept of mode in the early period is Mashaqah's c.1840 work. Mashaqah does not discuss the modes in terms of scales; rather, he provides a unique melodic phrase for each mode. A review of these melodic phrases reveals no uniform approach to the issue of modal ambitus. Some, including Mashaqah's "doubled" modes (see Chapter IX, Section C.3), encompass a range of more than one octave. The phrase given for Shatt 'Araban, for example, extends over an octave and a minor sixth. Other phrases have a range of exactly one octave. A majority, however, have ranges of less than an octave. The phrases given for 'Iraq, Nakriz, and Bayyati Husayni, for example, extend over only a sixth (major, minor, or neutral). Saba is said to have a range of a fifth. One mode, Rahawi, is given a range of only a minor third. [3]

Examples of Mashaqah's Maqam Descriptions (adapted):
("-" signifies that the preceding note should be played "distinctly"; "B'b" signifies B three-quarters flat)

Shatt 'Araban: G Ab G c B Ab G d eb d c B Ab G F Eb D C BB [AAb] GG.
'Iraq: G F E-b- D C BB-b-.
Nakriz: G F# E-b- - A G - F# E-b- D C.
Bayyati Husayni: A - B'b A G - F E-b- - G A G F E-b- D.
Saba: F A F E-b- D.
Rahawi: G A, G and F# repeatedly, A G F# G.

These last five modes, it will be noticed, do not reach up to the octave of their respective tonic notes (BB-b-, C, D, D, and G, respectively). Another observation that can be made is that while most modes have their tonic/finalis at the bottom of their range, a few have this note in the middle. Rast's melodic phrase, for example, extends from GG to G; its tonic is C. Sikah's melodic line moves from C to c; its tonic is E-b-. One mode even has its tonic as its highest note: Bahalwan extends from its tonic, B-b-, down to E natural.

Rast: C D [E-b- F] G, C, GG, C.
Sikah: E-b- C E-b- G - c B-b- A G F E-b-.
Bahalwan: B-b- A G F# E, [F# G A] B-b-.

Mashaqah's melodic phrases offer empirically derived definitions of the various maqamat. These definitions show no standard approach to the issue of modal ambitus. On the contrary, each mode seems to have been developed with its own unique ambitus.

Ambitus in the Middle Period

As seen above, middle-period writers such as al-Shawwa and al-Hilu commonly acknowledge that most maqamat are built from eight notes but that some modes require a larger ambitus. Despite statements to this effect, these writers usually present the modes as containing larger than single-octave scales in sections where they discuss the individual maqamat. In these scalar presentations, three different approaches to the issue of modal ambitus are discernable: 1) presenting scales which ascend from the tonic to include ranges of two or nearly two octaves; 2) presenting scales which ascend from the tonic to the note g (called jawab Nawa, Saham, Ramal Tuti, or sol); and 3) presenting scales which extend over the range GG (Yakah/sol) to g (this last approach requires notes below the tonic for most modes).

Theorists who follow the first or third of these three approaches might well be influenced by a desire to match the Greater Perfect System, a two-octave scale found in ancient Greek and medieval Arab music theory. Although they do not explicitly acknowledge this influence, it is likely that most middle-period theorists knew of the Greater Perfect System. Ronzevalle, for example, discusses this two-octave scale (called al-jam' al-tāmm in Arabic) in his 1899 work (p.220 n.1).

D'Erlanger (Kitab Mu'tamar 1933:182ff.) and al-Hilu (1972:94ff.) follow the first of the three approaches mentioned above. D'Erlanger indicates the scales for 72 of the 95 maqamat he discusses, giving 16 modes with a scale of two octaves, 47 with a scale of an octave and some form of seventh (major, neutral or minor), 7 with a scale of an octave and some form of sixth (neutral or minor), and 2 with a scale of an octave and some form of third (neutral or minor). [4] al-Hilu presents 20 of his 32 modes with two-octave scales, and none with scales of less than an octave and a fourth. [5] All of these scales ascend from their tonic notes without including notes below the tonic.

It is not always clear why D'Erlanger and al-Hilu give the specific ranges they do since the scales often seem to end at arbitrary points. For example, a number of D'Erlanger's C-based modes are said to include a tetrachord on g, yet their scales are given as ending on b flat or b natural, i.e., one note short of completing the indicated tetrachord (see p.230, 232, 234, 236, etc.). al-Hilu himself complains about the seemingly arbitrary nature of many of the indicated ranges: in his presentation of maqam Nahawand he comments, "Some of them [referring to writers prior to the 'modern musical renaissance'--see note 5--and especially to D'Erlanger's work in the 1932 Congress publication; see Kitab Mu'tamar 1933:249] confine maqam Nahawand to 14 notes [i.e., one note short of two octaves], but I do not understand what the rationale is for reducing its second octave by one note" (1972:113 n.2). In his own work al-Hilu often adds a whole tone above two conjunct tetrachords in the second octave in order to complete the second octave (see p.113, 116, 118, etc.), but there a number of modes where he fails to do so, resulting in scales one note short of two octaves, the very thing he speaks against (see pp.109, 124, and 130).

The scales provided by D'Erlanger and al-Hilu are also surprising because they do not take into consideration notes below the tonic. In prose passages which accompany the presentations of the various modal scales, such notes are often stated to be essential to the proper exposition of the maqam in question. A proper statement of maqam Rast, for example, is said to require use of the notes GG, AA, and BB-b- (D'Erlanger 1933:227; al-Hilu 1972:107). However, both writers give Rast's scale as ascending from the tonic C; i.e., the required notes below the tonic are not included in the mode's scale. From this point, it is clear that D'Erlanger and al-Hilu consider a mode's scale to be a theoretical construct that is not affected by the modal ambitus found in the dynamic realm of performance.

The majority of the scales presented by D'Erlanger and al-Hilu extend above the note g, commonly considered to be the upper limit of the overall gamut in Arab music (see Chapter II) (all but eight of D'Erlanger's 72 scales extend higher than g, with 26 modes extending to c' and one to d'). D'Erlanger comments on this point saying that he has determined "the extreme limits of [each mode's] tessitura. We point out, however, ... that the notes added to the upper register of the fundamental octave of certain modes are inaccessable to the voice and are consequently employed only in instrumental compositions" (1949:101). D'Erlanger acknowledges the extreme range of the scales he notates when he comments in many of his presentations that ascent to the highest tetrachord (usually including notes above g) is only realized "whenever possible" (see 1933:265). [6]

Other middle-period writers generally avoid notes above g when presenting the modal scales. For example, in the Institute of Oriental Music report in the 1932 Congress publication (Recueil 1934:529ff.), 46 of 52 modes are given scales that extend from their respective tonics to the note g, i.e. GG to g, AA to g, BB-b- to g, C to g, D to g, etc. [7]

Mahfuz (1965:267ff.) extends the scales of 21 of his 22 modes to the note g. But he also adds a tetrachord or more below the tonic for each mode and thus gives 17 of the modes a GG to g ambitus. (The exceptions are maqam Jaharkah, given as extending from C to c', a fourth above g; Busalik, AA to g; Shawq Afza, FF to g; and Sikah and Musta'ar, BB-b- to g.) al-Khula'i and Shalfun (1921:158ff.) also indicate a similar two-octave ambitus for a number of modes (see al-Khula'i's comments on the modes Suznak and Hijaz Kar; 1904:41 and 42). [8]

The three approaches to modal ambitus in the middle period are seen in the following examples of the scale for maqam Rast. These are adapted from 1) D'Erlanger (1933:226), 2) the Institute of Oriental Music's report in 1932 Congress publication (Recueil 1934:543), and 3) Mahfuz (1965:320).

1. C D E-b- F G A B-b- c d e-b- f g a b-b- c
2. C D E-b- F G A B-b- c d e-b- f g
3. GG AA BB-b- C D E-b- F G A B-b- c d e-b- f g

In conclusion, when presenting scales for each of the individual maqamat, middle-period theorists are guided by theoretical presuppositions which dictate how large a modal scale should be. This approach differs from the early-period treatment of modal ambitus in that it does not attempt to incorporate data derived from an analysis of the modes as they exist in the realm of performance.

Ambitus in the Present-Day Period

In the present-day period of Arab modal theory the vast majority of maqamat are presented as having a single-octave ambitus. As stated above, writers in this period, when defining the concept of maqam, usually fail to even mention the fact that some modes deviate from the single-octave norm. [9] This new understanding is in keeping with the processes of simplification and standardization that were widely applied in this most recent subperiod, usually with a goal of making Arab music and Arab music theory easier to teach and easier to learn. Single-octave scales was also inspired by the single-octave model found in Western music theory. Note that, in the present day, students first learn Western scalar theory (the major and minor scales and their transpositions around the cycle of fifths) before they begin to study Arab modal theory (see Chapter III).

The single-octave norm is also in consonance with the dominant present-day understanding that the maqamat are most commonly formed from only two tetrachords. These two tetrachords usually stand in conjunct or disjunct relationship to one another. In either case, the modal scale reaches the eighth note and then duplicates itself in the new octave. Since most modes are understood to exhibit simple duplication at the octave, it is considered sufficient to present only the initial octave when defining the maqamat. See the following two examples:

maqam Rast (disjunct tetrachords on C and G):

```
 ______________     ______________
:              :   :              :
C   D  E-b-  F   G   A  B-b-  c   d  e-b-  f   g   a   b-b-  c
                              :______________: :________________:
```

maqam Bayyati (conjunct tetrachords on D and G):

```
 ______________ _____________
:              :             :
D  E-b-  F   G   A Bb   c   d  e-b-  f   g   a bb   c   d
                            :______________:____________:
```

As part of my analysis of the concept of ambitus in the present-day period I have gone through the recent literature and identified all the modes which are presented as deviating from the single-octave norm. These maqamat can be divided into five groups: a) those with Saba-related structures; b) modes based on BB-b- and E-b-; c) modes which are thought to be confined to either a high or low ambitus; d) modes which require the use of one or more notes below the tonic, and e) modes with minimal ranges. It will be seen that for a majority of these modes an important factor in their unusual ambitus is the fact that they do not fit the common patterns of conjunct or disjunct tetrachords mentioned above.

a. Saba-related modes:

In present-day Arab music theory the three most commonly cited examples of larger than single-octave ambitus all contain "Saba structures," the most common being maqam Saba itself. "Saba structures" are unique in a number of ways. Most significantly for the present discussion, they do not duplicate at the octave; thus, a complete statement of their structures must describe an area larger than an octave. Seven Saba-related modes are included in the present-day literature (two more are mentioned in middle-period works; see note 14). The scalar/tetrachordal structures of these seven modes will be discussed in turn.

i. Saba

The first two tetrachords of maqam Saba, Saba on D and Hijaz on F, stand in an overlapping (mutad~~h~~ākhil) relationship (see diagram below). Above the second tetrachord, there is the note c, and then d flat instead of d natural. [10] The interval from the tonic D to this d flat is a diminished octave; this is the ambitus that is often given in present-day presentations of maqam Saba. However, the mode is commonly recognized as continuing beyond the db to include e and f, the last four notes forming a Hijaz tetrachord on c, and giving an overall ambitus of an octave and minor third (see, for example Muhammad 1984:29). [11]

```
maqam Saba:  _____________               ___________
             ¦ jins Saba  ¦              ¦jins Hijaz¦
             D    E-b-    F Gb     A Bb   c db      e f
                          ¦jins Hijaz¦
```

ii. Bastanikar

A closely related example is the less common maqam Bastanikar, which has the same notes as maqam Saba but which includes an additional tetrachord below Saba's tonic D, namely, a Sikah trichord on BB-b- (also called an 'Iraq tri- or tetrachord). Often presented as having an ambitus of a neutral octave, from BB-b- to Bb, Bastanikar's complete range is commonly recognized as an octave and neutral fifth.

```
maqam Bastanikar:
                    _____________               ___________
                    ¦ jins Saba  ¦              ¦jins Hijaz¦
    BB-b-    C      D    E-b-    F Gb     A Bb   c db      e f
    ¦ jins Sikah ¦               ¦jins Hijaz¦
```

iii. Dalanshin

The third commonly cited example of larger than single-octave ambitus is another less common maqam called Dalanshin. Dalanshin, a C-based mode, has the structure of maqam Rast up to the octave note c (i.e., Rast tetrachords on C and G), but when it enters the second octave it establishes a third tetrachord, not on c, but on A: by adding a d flat instead of a d natural Dalanshin builds a Saba tetrachord on A. Minimally, the range of the maqam ends with the d flat giving an ambitus of a minor ninth; however many extend the mode by including the second tetrachord of maqam Saba transposed to A, i.e., Hijaz on c. The additional notes e and f give an overall ambitus of an octave and a fourth.

<u>maqam Dalanshin:</u>

```
    _____________          _____________
 !    jins Rast   !     !    jins Rast    !
 C     D   E-b-   F     G    A    B-b-    c db        e f
                             !_jins Saba_!            '
                                          '_jins Hijaz!
```

iv-vi. Shawq Tarab, Saba Zamzamah, Tarz Nuwin, and Shawq Afza

Four other Saba-related modes have larger than single-octave ranges but are mentioned only rarely in the present-day sources. First, Shawq Tarab, a rare mode, has the characteristics of maqam Saba from the note D but, like maqam Bastanikar, its initial tetrachord is situated below the Saba tetrachords: Shawq Tarab starts with a Kurd tetrachord on AA. Some writers mention only the first of the Saba tetrachords (Saba on D) and by adding the following note, A, present the maqam as having a perfect-octave ambitus (<u>al-Halqah</u> 1964:21; Muhammad 1934:47). Salah al-Din presents this mode as having the first two of Saba's tetrachords (Saba on D and Hijaz on F) and thus defines the mode as encompassing a minor ninth, AA to Bb. However, the maqam can be extended to include Saba's full range.

Shawq Tarab:

```
 ¦  jins Kurd    ¦ jins Saba  ¦
 AA BBb    C    D   E-b-   F Gb       A Bb     c db      e f
                           ' jins Hijaz '     ' jins Hijaz'
```

Second, maqam Saba Zamzamah, another rare mode, has the same basic structure and D to f ambitus as maqam Saba except that it uses Eb instead of Saba's E-b-.

The last two examples in this group have only the top part of the "Saba structure," i.e., Hijaz tetrachords on F and c.

maqam Tarz Nuwin:

```
           ¦  jins Kurd  ¦
           C Db    Eb    F Gb      A Bb     c db      e f
                         ¦ jins Hijaz¦      ¦ jins Hijaz¦
```

maqam Shawq Afza:

```
      ¦ jins `Ajam  ¦                   ' jins Nawa Athar '
      BBb    C    D Eb    F Gb      A Bb     c db      e f
                          ¦ jins Hijaz¦      ¦ jins Hijaz¦
```

Many present-day writers do not include the third tetrachord when presenting the modes Tarz Nuwin and Shawq Afza and thus keep the modes to a single octave, i.e., C to c, and BBb to Bb, respectively (see Spector 1970:252 & 254, for example). Muhammad (1984:46) and Salah al-Din (1950:190) present these modes with the larger-than-single-octave ambitus noted above.

Salah al-Din presents maqam Shawq Afza as having a Nawa Athar pentachord on Bb instead of a Hijaz tetrachord on c.

In structure, the Saba-related modes are unique in that they do not duplicate at the octave. In addition, in three of these modes (Saba, Saba Zamzamah, and Bastanikar), the tonic note does not reappear at the octave. [12] As a result, a complete statement of their structures must describe an area larger than an octave. (These modes are discussed again in Chapter X, Section E.)

the seven Saba-related modes: [13]

Saba:					D	E-b-	F	Gb	A	Bb	c	db	e	f
Bastanikar:		BB-b-	C		D	E-b-	F	Gb	A	Bb	c	db	e	f
Shawq Tarab:	AA	BBb	C		D	E-b-	F	Gb	A	Bb	c	db	e	f
Saba Zamzamah:					D	Eb	F	Gb	A	Bb	c	db	e	f
Tarz Nuwin:			C	Db		Eb	F	Gb	A	Bb	c	db	e	f
Shawq Afza:		BBb	C		D	Eb	F	Gb	A	Bb	c	db	e	f
+ Dalanshin:			C		D	E-b-	F	G	A	B-b-	c	db	e	f

b. BB-b- and E-b- modes:

A second group of modes are occasionally presented as having a larger than single-octave ambitus because of a special feature in their tetrachordal structure. However, this is but an optional designation since these modes fit the common single-octave mold by having their notes and tetrachords repeat at the octave. The modes in question are based on BB-b- or E-b-, start with a Sikah trichord on BB-b- or E-b- and then follow this trichord with a conjunct tetrachord(4) from D or G, respectively (see diagrams below). This structure results in the latter tetrachord ending two notes before the octave. The remaining notes (A and B-b-, or d and e-b-) can either be added without comment as to their tetrachordal affiliation (this would allow for a single-octave presentation of these modes) or they can be presented as part of a Rast tetrachord, on G or c, respectively. In the latter case the Rast tetrachord extends beyond the first octave, finishing on the ninth note above the tonic. [14] Theorists who present this third tetrachord have adopted the practice of separating the ninth note from the others by a vertical line (see diagrams below). [15]

maqam 'Iraq:

```
     ____________  _______________
    |jins Sikah | jins Bayyati   |               |
   BB-b-   C     D  E-b-    F     G    A    B-b-  |  c
                                  '_ _jins Rast_ |_ '
                                      optional
```

maqam Rahat al-Arwah:

```
     ____________  _______________
    |jins Sikah |  jins Hijaz    |               |
   BB-b-   C     D  Eb         F# G    A    B-b-  |  c
                                  '_ _jins Rast_ |_ '
                                      optional
```

maqam Sikah:

```
     ____________  _______________
    |jins Sikah |   jins Rast    |               |
    E-b-   F     G   A    B-b-    c    d    e-b-  |  f
                                  '_ _jins Rast_ |_ '
                                      optional
```

maqam Huzam:

```
     ____________  _______________
    |jins Sikah |  jins Hijaz    |               |
    E-b-   F     G  Ab          B c    d    e-b-  |  f
                                  '_ _jins Rast_ |_ '
                                      optional
```

c. Modes With Special High or Low Ambitus

A third category of modes with special ranges in the present-day theory are those few maqamat which are conceptualized as requiring significant (or exclusive) exposition in either the lower or higher octaves. Although such modes were rather common in the first two periods of the modern era, today only the modes Kirdan, Rahawi, and Muhayyar are commonly mentioned in this regard.

Kirdan and Muhayyar are usually described as resembling the modes Rast and Bayyati, respectively, except that they are centered predominantly in the upper octave. Muhammad (1984:37), al-Kurdi (1984:363), and Surur (1986:123), for example, all comment that maqam Kirdan is maqam Rast centered "in the higher region" ("fi al-jawabat" or "fi mintaqah al-jawabat"). al-Kurdi, a qānūn and theory teacher at three of Cairo's music institutes, gives Kirdan an unusual tetrachordal structure which reflects this high melodic focus: he gives its primary tetrachord (jins al-aṣl) as Rast on c, and its secondary tetrachord (jins al-far') as Rast on G, thus giving the mode an ambitus of from G to f or g, with the tonic being the note c (personal communication, 6/7/87; Surur gives a similar presentation [1986:123]). All agree, however, that maqam Kirdan can descend and end on the note C (Rast/do), in which case one must consider the range of Kirdan as extending from C to g. ('A.H. Nuwayrah gave Kirdan this range in an interview conducted in January, 1984.)

al-Kurdi, however, comments that in his mind the Rast tetrachord on C is not theoretically a part of maqam Kirdan; rather, it is a part of maqam Rast.

```
maqam Kirdan:                                  (jins al-asl)
                                           |    jins Rast    |
  (C    D   E-b-   F)   G     A   B-b-    c    d   e-b-   f   g
                        | jins Rast      |
                        (jins al-far`)
```

A parallel discussion takes place with respect to maqam Muhayyar. It is occasionally given the range of G to g with d as its tonic; however, as with maqam Kirdan, Muhayyar is commonly acknowledged as descending an octave, to D (Dukah/ re), and closing there. This creates an overall ambitus of D to g (see Surur 1986:123 where the mode is given this range).

```
maqam Muhayyar:                                     (jins al-asl)
                                                    |jins Bayyati|
              (D   E-b-   F)   G    A   B-b-   c    d   e-b-   f   g
                               | jins Rast     |
                               (jins al-far`)
```

In present-day Cairo, maqam Rahawi is conceptualized, by some, as "maqam Rast performed in the lower region [minṭaqah al-qarārāt]" (Nuwayrah, personal communication 1/84; Surur 1986:124). al-Kurdi (personal communication, 6/7/87) and Surur (ibid.) analyze Rahawi as having Rast on C as its jins al-aṣl and Rast on GG as its jins al-far`. Nuwayrah, al-Kurdi, and Surur thus present Rahawi with a GG to G range. [16]

```
maqam Rahawi:            (jins al-asl)
                      !   jins Rast    !
   GG    AA    BB-b-  C   D  E-b-  F   G  (A   B-b-   c ...)
   !      jins Rast   !
     (jins al-far`)
```

There are a few other instances of special low or high ambitus that are mentioned by only one or two writers. For example, Surur (1986:181) mentions maqam Muhayyar Kurd as requiring three tetrachords, Kurd on D, Rast on G and Bayyati on d, giving an ambitus of D to g. Surur also recognizes a maqam Tahir which he gives as maqam Bayyati with a low ambitus (this parallels Rahawi's relationship to maqam Rast) (personal communication 6/1/87).

It must be emphasized that in the present-day period the modes Kirdan, Muhayyar, Rahawi, and Tahir are not commonly recognized. They tend to exist only in the realm of music theory. [17] Pieces in Kirdan or Rahawi, for example, would invariably be referred to as being in maqam Rast. (Surur points out that the song "Ya Shadi al-Alhan" and the instrumental piece, <u>samā'ī</u> Rast by al-Qasabji, are really in the modes Kirdan and Rahawi, respectively, but that they are universally referred to as being in maqam Rast; see, for example, al-Hitami 1983 v.1:6 or Nasir 1980:76.)

d. Modes Which Require Use of One or More Notes Below the Tonic

One of the most significant shortcomings of the modern-day concept of single-octave ambitus is that it ignores the often essential role of notes below the tonic. (These notes are discussed further in Section G of this chapter). Although performers commonly acknowledge that one or more notes below the tonic are often needed to initially state and/or ultimately cadence upon the tonic, such notes are mentioned in the present-day literature in only a small number of cases, most common being with respect to the modes Sikah and Busalik. Kamil's presentation of maqam Sikah, for example, includes the comment, "It is necessary to touch the note nim Kurd [D=/=] before settling on Sikah [i.e., the tonic E-b-]" (1975:67). And for maqam Busalik, "It is necessary to touch Zirkulah [C#] before centering on Dukah [i.e., the tonic D]" (ibid.:66). The C# leading tone in maqam Busalik is considered an especially significant feature since it is considered, by some, to be the main difference between maqam Busalik and maqam 'Ushaq ('Ushaq Masri). al-Khula'i, for example, writes that the only difference between these two modes is that Busalik uses C# while 'Ushaq uses C natural (1904:43). Whenever notes below the tonic are understood to be part of a mode's essential features, then single-octave statements of the mode's scale (statements which extend from the tonic note to the octave) fail to present an accurate picture of the mode's essential ambitus.

maqam Sikah: (D=/=) E-b- F G A B-b- c d e-b-
maqam Busalik: (C#) D E F G A Bb, c or c#, d

e. Modes with Minimal Ranges

A fifth and last category of modes which differ from the single-octave norm in the present-day period are the small number of maqamat which are conceived, by some, as having minimal ranges. Maqam Musta`ar, for example, is said, by some, to occur when the note F# is introduced as a lower neighboring tone to G in the scale segment E-b- F G A and Bb. Thus, Surur (1986:166) defines maqam Musta`ar as E-b- F G A Bb A G F# G F E-b-. This phrase has a range of a neutral fifth. This does not, however, prevent Kamil (1975:68), Muhammad (1984:53), and others from representing Musta`ar as having an octave scale: E-b- F# G A Bb c d e-b-. (Middle-period writers give even larger scales; see Mahfuz 1964:359.) Nuwayrah describes two other modes, Ramal and Safa, as having minimal ranges. He defines maqam Ramal as E-b- F Gb A Gb F E-b- D# E-b-, giving it a range of a diminished fifth. (Idelsohn [1913:17] also indicates that Ramal moves within the range of a fifth but gives its notes as E-b- F# G Ab B-b-.) Nuwayrah defines maqam Safa as D E-b- F G most of the time but the G is at times replaced by G-b- (personal communication, 1/1983). These examples of modes with minimal ranges serve to recall similar phenomena in early-period descriptions of the maqamat (see p. 462 above).

In summary, ambitus has not been a major issue in the modern Arabic theoretical literature. Nevertheless, it can be studied as a significant indicator of change. In the absence of the concept of scale as applied to the analysis of the various modes, early-period writers present melodic phrases for each mode. These phrases offer no uniform approach to modal ambitus. Armed with a "new" concept of scale, middle-period writers were able to systematize their presentations of modal ambitus: scales were often presented as containing a range of two or nearly two octaves. In the present-day period, this range was felt to be excessive. The single-octave range, always an acknowledged ideal, became the norm in part in imitation of the Western concept of single-octave scales. While the early-period approach was based on a description of practice, the middle- and present-day-period approachs are based on theoretical presuppositions which seek to systematize and standardize modern Arab music theory. The numerous exceptions to the single-octave ambitus which may be isolated in the present day show that these theoretically imposed ranges are not necessarily inherent to Arab music. Rather, they are a creation of the music theorist. [18]

NOTES FOR CHAPTER X, SECTION C

1. Hafiz, perhaps reacting in part to the large number of maqamat with larger than single-octave scales, suggests that the modes should be considered as encompassing ten or twelve notes (1971:186).

2. Note that D'Erlanger offers no specific Arabic term for "ambitus."

By suggesting that many of the modes have supplementary notes and thus larger than single-octave ranges, D'Erlanger is reflecting an understanding prevalent in middle-period works. This point is discussed further below. However, see the general comments by al-Shawwa and al-Hilu, two other middle-period writers quoted on the previous and following pages, who present the common "single-octave ambitus with exceptions" understanding.

Mashaqah ([c.1840] 1899:302) uses the terms qarārāt and jawābāt differently, i.e., as relative terms which refer to notes that are an octave apart from each other: the notes in the first octave are the qarārāt while the notes in the second octave are the jawābāt (for example, in maqam Bayyati D E-b- F G ... versus d e-b- f g ...). D'Erlanger uses the terms to refer to the notes on either side of a mode's central octave. These terms are still used today with both of these variant meanings. The central octave continues to be called al-dīwān al-asāsī in present-day Cairo (see also Rawdat al-Balabil 1921:159).

3. Mashaqah includes four comments which indicate that he is serious about the ranges that his melodic lines contain: After describing the mode Bayyati 'Ajami as including the notes from D to Bb he comments (ibid.:884) that movement in this mode "does not ascend ... to what is above the note Bb." The same comment is given for maqam Bayyati Ḥusayni (ibid.). After giving a melodic line for the mode Musta'ar which does not descend below the tonic, E-b-, he comments, "One does not descend in it to the note C," an apparent reference to such a descent in the mode discussed immediately prior to his presentation of Musta'ar (ibid.:928). And, after describing maqam Hijaz as extending only from D to G, he adds "but the performers of our day, ... in most performances of it they ascend in it to B-b- and to what is above that also" (ibid.:888). These four examples give the impression that Mashaqah includes specific comments wherever exceptions exist to the ranges indicated in his melodic lines.

Villoteau also seems to indicate that the range for the individual maqamat is restricted in at least some cases. He says that the modes Doukah (Dukah), Naouf, and O'chyran ('Ushayran) are called Mahyar (Muhayyar), Naoua (Nawa), and Hosseyny (Husayni), respectively, when they are played in a higher octave (1826:128-129). It might be assumed, then, that these six modes were restricted to their specific octaves.

4. More specifically, D'Erlanger gives:
16 modes with a scale of 2 octaves;
6 " " " " " an octave and a major 7th;
8 " " " " " an octave and a neutral 7th;
33 " " " " " an octave and a minor 7th;
6 " " " " " an octave and a neutral 6th
1 " " " " " an octave and a minor 6th;
1 " " " " " an octave and a neutral 3rd;
1 " " " " " an octave and a minor 3rd.

5. Of the 12 modes not given two-octave scales, seven are given a range of an octave and some form of seventh, two are given an octave and a neutral sixth, one an octave and a neutral fifth, and two an octave a fourth (one augmented, one perfect).

al-Hilu acknowledges that he has used D'Erlanger's 1933 report as a source for deciding the range of the various scales that he presents (1972:94 n.1): "I have affixed the number of notes for this maqam and those after it only to establish the system that was in use before the modern musical renaissance...." From a footnote on page 113 (quoted in the next paragragh), it is clear that he considers D'Erlanger's report in the 1932 Congress publication to be one of the sources for the period prior to the "modern renaissance."

6. D'Erlanger's 1949 presentation of the modes (p.118ff.) differs in a number of respects from his report in the 1932 Congress publication. For example, the later publication is in French and uses Western notation to indicate the scales; the earlier work is in Arabic and uses the Arabic/Persian note names to record the scales. The 1949 publication also includes 29 modes not included in the earlier work. When these "new" modes appear in 1949, there is a clear tendency to present them with smaller ranges than the modes that appeared in the earlier work. For example, in the 1949 work, he gives ten "new" modes with a scale of an octave and a fifth, nine with a scale of an octave and a fourth, one with an octave and a neutral third, and two with an octave and a minor third. This suggests that D'Erlanger changed his mind about the large ranges he had previously given the modes and adopted a more restricted sense of ambitus.

7. Of the six exceptions, four extend beyond g (Jaharkah, from F to c; Bastanikar, from BB-b to a; and 'Ajam 'Ushayran and Shawq Afza, from BBb to b flat) while two end before g (Tarz Nawayn, from C to f; and Saba Busalik, from D to gb). Fahmi gives the same ranges in his 1965 work (p.56ff.).

8. All three of these writers, Mahfuz, al-Khula`i, and Shalfun, present the scales as ascending from the tonic to g, and then descending past the tonic to GG; in other words, the notes below the tonic are presented as occurring only in descent, not in ascent.

Touma (1977,41ff.) also gives notes below the tonic for many of his modes. He differentiates between a fundamental range and what D'Erlanger calls "supplementary" notes by notating the former with whole-note symbols and the latter with quarter-note symbols.

9. al-Khula`i (1904) bridges the middle and present-day periods by presenting many of the modes with single-octave scales but then adding numerous comments on the notes above and below this central octave. His additional notes above the octave include up to but not beyond the note g.

al-Shawwa (1946), although clearly part of the middle period in many respects, follows the approach of the present-day period when he indicates the scales of many of the modes: of the 62 scales he notates, 37 are given single-octave scales. As for the other modes, three are given a range of nine notes, 13 are given a range of ten notes, 4 are given eleven notes, 3 are given twelve notes, and 2 are given thirteen notes.

Fahmi also bridges the middle and present-day periods by first presenting the modes with single-octave scales (1965:33ff.) and then presenting the same modes with scales extending from their respective tonics to the note g (p.56ff.).

10. Note that maqam Saba does not rise to the octave of the tonic D. This is undoubtably a reaction to the mode's having a flat fourth, Gb, since the d flat provides a perfect fifth to this Gb. Mashaqah ([c.1840] 1899:884) recognizes this point with respect to a maqam he calls Saba Chawish: "In this mode the note G [Nawa] is modified...and Gb [Hijaz]...[is] used in its place. By reason of the modification of the note G one dispenses with using its fifth [ghammāz; see Chapter X, Section E below] which is the note d [Muhayyar] and uses instead the note db [Shahnaz]...because it is the fifth of the note Gb which took the place of G."

11. A few middle-period writers extend the range of maqam Saba even further by adding a Jaharkah tetrachord on f (D'Erlanger 1933:297; D'Erlanger 1949:282; al-Hilu 1972:122; al-Hilu uses D'Erlanger's 1933 work as one of his sources). This Jaharkah tetrachord is not, however, recognized by the musicians and theorists interviewed for the present study.

12. These modes can, however, be restated at the octave, i.e., their entire structures can be transposed up an octave. Saba, for example, can be played on d, i.e. d e-b- f gb...

13. al-Shawwa, a middle-period writer, includes two other modes that fit this group. The first is maqam Sinbulah Nahawand (1946:51), also called Nahawand Sinbulah or Nahawand Murassa':

C D Eb F Gb A Bb c db e f

D'Erlanger (1949:212) gives a maqam Nahawand Rumi with this same scalar and tetrachordal structure. In the present day, Nahawand Sinbulah/Nahawand Murassa' is commonly presented as having a single-octave scale, from C to c.

al-Shawwa's second addition to the seven Saba-related modes is maqam Dukah (ibid.:76). This mode mixes maqam Saba (from D to f) and the modes Hijaz and Kurd on D (see also D'Erlanger 1949:230). Writers and musicians in the present day do not recognize a maqam Dukah.

14. Salah al-Din (1950:207-208) calls tetrachords which extend over into the second octave by the name *ajnās mukammilah*, literally "completing tetrachords." Note that the Rast tetrachord could be presented as a trichord in order to preserve the single-octave ambitus; however, there is no precedence for conceptualizing a Rast trichord: the Rast tetrachord is always presented as containing either four or five notes.

15. This method of analysis is found with respect to the modes Rahat al-Arwah and Farahnak (BB-b- C D E F=/= G A B-b-c) in Salah al-Din (1950:129-130), with respect to Huzam in al-Hifni (c.1946:186), with respect to the four modes shown in the following diagram in Muhammad (1984:53-54), and is presently taught at the main Cairo music institutes in music theory classes.

16. This does not prevent others from giving this mode a more standard C to c (or larger) scale. For example, a middle-period work, the Institute of Oriental Music's report in the 1932 Congress publication, gives maqam Rahawi as having a scale from C to g (*Recueil* 1934:555; actually, the Institute's transcriptions give Rast as G; thus Rahawi is really presented from G to d).

17. Maqam Muhayyar is commonly known outside the realm of music theory only because of a small number of pieces, most prominent being *samā'ī* Muhayyar, written by the Turkish composer and tambur player, Jamil Bey.

18. A number of German scholars have approached the issue of modal ambitus in twentieth-century Arab music from a different direction. They focus on ambitus in the realm of

performance rather than the realm of music theory. Idelsohn, for example, comments that maqam Sikah, whose tonic is E-b-, moves from C to c (1913:34). (This matches the range presented for Sikah by Mashaqah; [c.1840] 1899:928.) Idelsohn's remarks seem to result from his personal observations rather than from a detailed analysis of a large body of pieces. More research is needed in order to document modal ambitus in performance.

D. TETRACHORDS

Since the revival of tetrachordal theory in the 1920s and 30s, tetrachords have become the most significant element in the definition of the individual maqamat after only the concepts of tonic and scale. As will be seen in the following discussion, there is no single way to use tetrachords in the analysis of a given mode. Which and how many tetrachords one recognizes depends largely on one's understanding of the concept of maqam. For example, a complex definition of the maqamat might lead one to identify as many as nine or ten tetrachords for a single mode; a simple definition might result in one recognizing only two tetrachords. These two extremes are found in the works middle-period and present-day theorists, respectively; thus, we will discuss the two periods separately.

Tetrachords in the Middle Period

One of the first decisions to be made when analyzing a mode by its constituent tetrachords is how many consecutive tetrachords to recognize; the answer to this question is tied to one's understanding of the concept of modal ambitus. In middle-period sources the modes are commonly analyzed as having three or more consecutive tetrachords. We offer two examples: In the sources for the present study the first examples of tetrachordal analysis of the maqamat occur in the 1932 Congress publication within two separate reports, that of D'Erlanger and that of the Institute of Oriental Music (Cairo). In D'Erlanger's report the modes are analyzed in terms of a series of four consecutive tetrachords. Four tetrachords are needed because the scales of the various maqamat are presented with ranges of two or nearly octaves (rising from the tonic note). For some modes D'Erlanger also indicates that the tetrachord below the tonic is an essential element in the mode's definition; in such cases he has identified a series of five consecutive tetrachords. For example, D'Erlanger indicates the following tetrachords for maqam Rast, whose tonic is C (1933:227): [1]

```
             (1st tetra)  (2nd tetra)            (4th tetra)
             ¦jins Rast¦  ¦jins Rast¦            ¦jins Rast¦
GG  AA BB-b- C  D E-b- F  G  A B-b- c  d e-b- f  g  a b-b- c
¦ jins Rast  ¦                       ¦jins Rast¦
                                     (3rd tetra)
```

In the Institute report the modes are usually given scales which ascend from the tonic to the note g. This results in the recognition of three or four consecutive tetrachords for each mode: Maqam Shatt 'Araban, whose tonic is GG, is analyzed as containing four ascending tetrachords (1934:532); maqam Rast is given three consecutive tetrachords (ibid.:543):

Shatt 'Araban:

```
¦ jins Hijaz ¦j.Nawa Athar¦ j. Hijaz¦j.Nawa Athar¦
GG AAb    BB C  D   E F=/= G Ab    B c  d e-b- f  g
```

Rast:

```
                 _____________ __________ _____________
               | jins Rast   |jins Rast| jins Rast    |
               C  D E-b- F   G  A B-b- c  d e-b- f    g.
```

A second issue which affects the results of a tetrachordal analysis is how many tetrachords to recognize per octave. Minimally, an octave contains just two tetrachords standing in either conjunct or disjunct relationship to one another. In the middle period, however, it is common to acknowledge a larger number of tetrachords based on four considerations: 1) admitting separate ascending and descending scales; 2) allowing multiple tetrachordal interpretations for one and the same scale; 3) recognizing tetrachords which occur only temporarily in the realization of a given maqam; and 4) allowing for compound modes, i.e., modes which contain the characteristics of two or more distinct maqamat.

1. The most common way to acknowledge more than two tetrachords within a mode's central octave is to admit separate ascending and descending scales for each mode. If, for example, maqam Rast has B-b- in ascent but Bb in descent, then the mode has a Rast tetrachord on G in ascent and a Nahawand (also called Busalik) tetrachord on G in descent. Both reports in the 1932 Congress publications include separate ascending and descending scales and thus separate tetrachordal analyses for the mode in ascent and descent.

maqam Rast:

```
 |jins Rast|  |jins Rast|      | j. Nah.|  |jins Rast|
 C  D E-b- F  G  A B-b- c      c  Bb A  G  F E-b- D  C
```

2. Additional tetrachords are available if one is ready to acknowledge different tetrachordal interpretations for the same scale. For example, different theorists recognize the following tetrachords within the first octave of maqam Bayyati: (We will see below that many of these additional tetrachords are not mentioned in the present-day theoretical literature.)

```
D  E-b-  F   G   A Bb   c   d
|jins Bayyati|       |     |   |
         | Jaharkah|      |   |
              |j.Nahawand|   |
                   | jins Kurd|
```

3. A third way that one might include additional tetrachords in a mode's central octave is by incorporating tetrachordal changes that occur only temporarily in the performance of a given maqam (these being apart from ascending and descending variants). Such tetrachords are somewhat common in middle-period works (see D'Erlanger 1949:103-104). For example, a number of middle-period writers present maqam Hijaz as containing a Hijaz tetrachord on A:

maqam Hijaz:

```
               _____________  _____________
              ¦ jins Hijaz ¦j. Nahawand ¦
              D Eb      F# G    A Bb     c   d
                                ¦
                                A Bb      c# d
                                ¦_jins Hijaz¦
```

In a similar way, D'Erlanger presents maqam Bayyati as including an 'Ajam tetrachord on Bb (ibid.:232): [2]

maqam Bayyati:

```
               ________________  ______________
              ¦ jins Bayyati   ¦j. Nahawand ¦
              D   E-b-   F     G    A Bb     c    d
                                      ¦
                                      Bb     c   d eb
                                      ¦_jins 'Ajam_¦
```

4. A fourth way that additional tetrachordal structures may be perceived involves a group of modes that contain the features of two or more distinct maqamat. We will refer to such modes as "compound" maqamat. [3] A number of compound modes are described in works from the middle period. Often mentioned are two groups of modes which begin in one maqam and end in either maqam Busalik or maqam Kurd (see D'Erlanger 1933:308 and 313-316; D'Erlanger 1949:294-95 and 298-301; al-Shawwa 1946:71-72 and 78; etc.). For example, maqam Bayyati Busalik is said to begin with Bayyati and end by "replac[ing] the Bayyati tetrachord on D with a Busalik tetrachord on D...." (D'Erlanger 1949:298).

maqam Bayyati Busalik:

```
¦jins Bayyati¦
D  E-b-  F   G
                 > A Bb   c   d
D      E  F  G
¦jins Busalik¦
```

Similarly, maqam Hijaz Busalik starts with maqam Hijaz and ends with maqam Kurd (D'Erlanger ibid.:300):

maqam Hijaz Busalik:

```
¦ jins Hijaz ¦
D Eb      F# G
                 > A Bb   c   d
D      E  F  G
¦jins Busalik¦
```

In conclusion, because of the large ambitus of the modal scales and the many ways that theorists admit more than two tetrachords per octave, middle-period theory often includes from four to nine or ten tetrachords in the definitions of a single mode.

Tetrachords in the Present-Day Period

Soon after the 1932 Congress, a new approach to tetrachordal analysis first appears in the modern literature: with but a few exceptions, the modes are presented as composed of only two tetrachords (see al-Hifni 1938; Hafiz

1971:183; Muhammad 1984:19; Surur 1986:114; and elsewhere). This has been the most common form of tetrachordal analysis throughout the present-day period. Underlying this approach are the following assumptions: a) that the modes, for the most part, have only single-octave ambitus; this eliminates the need for identifying more than two consecutive tetrachords; b) that the modes, for the most part, have only a single scale rather than separate ascending and descending scales (the Bb in maqam Rast, for example, is now understood to result in a new maqam called Suzdilar [Suzdular] [4]); c) that the character of a maqam is embodied in only two tetrachords thus obviating the need for recognizing various tetrachordal interpretations for the same scale; and d) that tetrachords which occasionally enter into the performance of a mode but which are foreign to that mode's primary scalar structure should be considered either as temporary modulations to a new maqam or as momentary colorings of the mode being played; in either case the new tetrachord should not be included in the definition of the main maqam.

The case of maqam Hijaz well illustrates the difference between the middle-period and present-day approaches to tetrachordal analysis:

maqam Hijaz:

a) tetrachords identified by various middle-period writers: (the Rast and Nahawand tetrachords on G can be seen as ascending/descending variants; the Rast tetrachord on G and the Bayyati tetrachord on A are different interpretations of the same scalar material; the Hijaz tetrachord on A and the Nahawand and Jaharkah tetrachords on d can be seen as temporary tetrachordal changes):

```
                                           ________
                                         ¦ Nahawand¦
                                         d   e f    g
                              ___________¦
                 _________   __¦j.Bayyati ¦_________ _________
                ¦ j.Hijaz  ¦jins Rast¦   ¦ j.Hijaz ¦Nahawand¦
GG  AA BB-b- C  D Eb    F# G  A B-b- c   d eb    f# g  a bb c
¦ jins Rast   ¦            ¦             ¦
                           G  A Bb   c   d e     f# g
                           ¦ Nahawand¦   ¦ Jaharkah¦
                              ¦
                              A Bb    c# d
                              ¦jins Hijaz¦
```

b) *tetrachords identified in most present-day sources:*

```
  ________  _________
¦ j. Hijaz¦ Nahawand¦
D Eb   F# G  A Bb   c   d
```

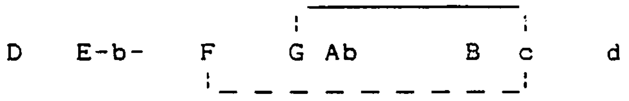
An important factor in the decision to disregard the precedents for a more complex definition of a mode's tetrachordal structure was the desire to simplify the music theory for the sake of the students of Arab music. al-Hifni, for example, one of the first to present the only-two-tetrachords approach, was Superintendent of Music in the Egyptian Ministry of Public Education (*Recueil* 1934:74), and was addressing his work to students in junior-high schools, senior-high schools, and music institutes (see ibid.:129). A conference held in Cairo in 1961-63 specifically cited the need for simplification when it passed a number of resolutions, one of which states that "every ... maqam is composed of two tetrachords and no more" (al-Halqah 1964:11,12 and 14). By specifying only two tetachords, this resolution was apparently addressing both the issues of modal ambitus and of the number of tetrachords per octave. This approach to tetrachordal analysis is presently taught in Cairo at the main music institutes. [5]

An important aspect of the process of simplification that has occurred in the present-day theory concerns the C, D, and E-b- based modes. Whenever possible, analysis of these modes in the present period tends to recognize upper tetrachords based on the note G while disregarding those based on F and A. This is especially the case when it is a question of two possible ways to interprete the same scalar segment. In the following modes, for example, F- and A-based tetrachords are indicated in middle-period sources in conjunction with a G-based tetrachord. In the present day, the F and A tetrachords are commonly omitted in favor of the G-based tetrachord:

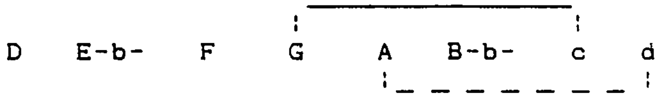
maqam Bayyati:

```
               ___________
              |           |
D  E-b-   F   G    A Bb    c    d
          |_ _ _ _ _ |
```

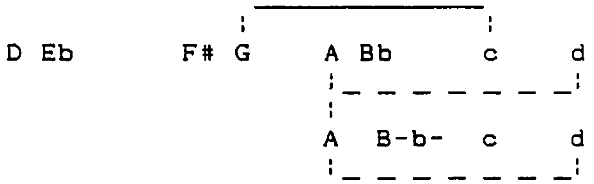
maqam Shuri:



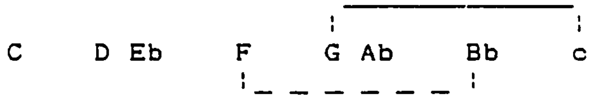
maqam Husayni:



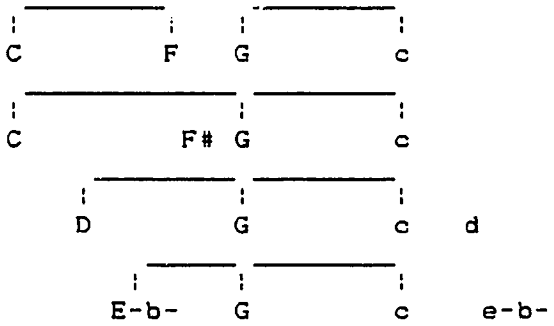
maqam Hijaz:



maqam Nahawand with Bb (often called *Nahawand Kurdi*):



As a result of this consolidation of tetrachordal theory around the note G, the C, D, and E-b- based modes are now most commonly analyzed in terms of one of the following four structures:



It must be pointed out that in most cases the resulting analyses do not contradict the definitions of these modes as found in middle-period sources, i.e., the G tetrachords are indeed indicated in middle-period works. The present-day analyses do, however, represent a simplification of what was a more complex understanding of the structure of the individual maqamat. [6]

While the literature of the present period and the teachings at the Cairo music institutes overwhelming support the idea of only two tetrachords for each mode, there have been a few recent efforts to expand the now standard approach by incorporating more than two tetrachords into the analysis of each mode. These efforts are here discussed in turn.

A small group of Cairo theorists have recently decided to incorporate three tetrachords in the definitions of the various modes (Fatah Allah 1971:80ff.; Fatah Allah, Mahmud Kamil, and Ghatas `Abd al-Mulk 1979:28ff.). Here the first and third tetrachords are referred to by the "traditional" names jins al-asl and jins al-far`. The "new" tetrachord, the middle tetrachord, is named jins al-hashw, literally "the tetrachord of insertion," or jins al-wast, i.e., "the intermediate tetrachord." In some cases the second and third tetrachords represent variant interpretations of the same scalar material:

maqam Bayyati:

```
 ___(jins al-aṣl)___ (jins al-far`)__
|                |                    |
D    E-b-    F    G      A  Bb        c     d
             |__________________|
             (jins al-ḥashw)
```

In other cases they serve to acknowledge ascending/descending scalar variants:

maqam Rast:

```
 ___(jins al-aṣl)___          ___(jins al-far`)___
|                  |         |                     |
C     D     E-b-   F         G      A    B-b-      c
                   F         G      A Bb
                   |_____________________|
                   (jins al-ḥashw)
```

In the works of Fatah Allah and Fatah Allah et al., three tetrachords are identified for every maqam that is analyzed. This approach has not, as yet, been widely adopted, however. For example, one recent work recognizes the concept of jins al-ḥashw but indicates such a tetrachord for only two of the 62 modes which are discussed (Surur 1986:151-52 and 157-58). [7]

A second approach to recognizing a third tetrachord is found in Muhammad (1984). For 12 of 72 modes, Muhammad indicates a third tetrachord which begins within or above the jins al-far`. She calls this tetrachord jins far` al-far`, i.e., "the branch of the branch tetrachord" (ibid.:19). In five cases the jins far' al-far' is a reinterpretation of the same scalar material. In maqam Kurd, for example, a Nahawand tetrachord on G is given as the jins al-far' while a Kurd tetrachord on A is indicated and called jins far' al-far' (ibid.:27):

maqam Kurd:

```
       ____________  ____________
      ¦ jins Kurd  ¦ j. Nahawand¦
      D Eb    F    G    A Bb    c    d
                        ¦_ _ _ _ _ _ ¦
```

In the remaining cases the jins far' al-far' serves to extend the scale into the second octave (these modes are discussed further in Section E below). In maqam Saba, for example, a Hijaz tetrachord on c is called jins far' al-far' (ibid.:29):

maqam Saba:

```
       __________               __________
      ¦jins Saba ¦             ¦jins Hijaz¦
      D  E-b-  F Gb     A Bb   c db     e f
               ¦jins Hijaz¦
```

It must be emphasized, however, that the terms al-hashw and far' al-far' are of recent origin and are not widely known or used.

Although we have discussed a number of dissimilar ways to use tetrachords in the analysis of the maqamat, there is a common understanding underlying all these approaches, i.e., when defining a given maqam one should identify only those tetrachords which are seen as contributing to the mode's unique character. This understanding serves to exclude some tetrachords which can be seen in the mode's scale but which are not considered to play a part in evoking the mode's unique character. For example, none of the above sources recognize the existence of a Bayyati tetrachord on D within maqam Rast or a Sikah tetrachord on E-b- within maqam Bayyati:

maqam Rast:

```
      _______________       _______________
  ¦   jins Rast    ¦    ¦   jins Rast    ¦
  C    D   E-b-    F    G    A   B-b-    c
       ¦ _ _ _ _ _ _ _ ¦
```

maqam Bayyati:

```
      ______________ _____________
  ¦  jins Bayyati ¦ j.Nahawand ¦
  D   E-b-    F    G    A Bb    c     d
       ¦ _ _ _ _ _ _ _ ¦
```

In the present day, there is some evidence that this understanding is breaking down in the wake of the perception of mode as scale. According to this new concept of mode, all of the tetrachords in a mode's scale can and should be identified as part of that mode's tetrachordal structure. We find this idea in Mash'al (n.d.:101-106) and expressed by Nuwayrah (in a series of theory lessons; 11/82 - 1/83). Thinking in terms of a single octave, both men analyze maqam Rast as containing the following tetrachords (a tetrachord from the note F is not included because F G A B-b- is not a recognized tetrachord):

```
C   D  E-b-  F   G   A   B-b-  c
¦ jins Rast  ¦
    ¦jins Bayyati¦
        ¦ jins Sikah ¦
                  ¦ jins Rast  ¦
```

In a similar fashion, Nuwayrah analyzes maqam Bayyati as containing the following tetrachords: [8]

```
D  E-b-  F   G   A  Bb   c   d
¦jins Bayyati¦
    ¦ jins Sikah ¦
         ¦j.Jaharkah¦
              ¦j.Nahawand¦
                   ¦jins Kurd ¦
```

This new approach has, however, received little support. Significantly, even theorists and musicians who consider themselves Nuwayrah's students reject his analysis of Rast and Bayyati. Surur, for example, comments, "Maqam Rast does not include a Bayyati tetrachord on D" (personal communication 6/3/87).

More-than-two tetrachords are occasionally recognized in the present day with respect to a small number of "compound" modes. However, these modes are now considered to be exceedingly rare. One example which is commonly cited by present-day Cairo theorists is maqam Zawil. This mode is said to begin with maqam Rast, then switch to maqam Nakriz, and then return to maqam Rast. Zawil, then, includes both a

Rast and a Nakriz (also called Nawa Athar) tetrachord on C and a Rast and Nahawand tetrachord on G (Nuwayrah, personal communication 1/83; Surur 1986:128; al-Kurdi, personal communication 6/7/87; see also Muhammad 1984:37). [9]

maqam Zawil:

```
        _______________       _______________
       ¦     Rast      ¦    ¦      Rast      ¦
       C    D   E-b-   F    G    A    B-b-   c

       C    D Eb      F#    G    A  Bb       c
       ¦_____Nakriz________¦____Nahawand_____¦
```

A clear example of the tendency towards fewer compound modes is seen in the case of maqam Suzdilar (Suzdular). In the middle period, Suzdilar was defined differently by different writers, but in each case it was considered to be compound in structure. The following tetrachords were indicated (see D'Erlanger 1933:229; al-Hilu 1971:109; Salah al-Din 1950:109; al-Shawwa 1946:43; etc.):

maqam Suzdilar:

```
C    D       E   F    G
¦j. Jaharkah_¦        ¦
¦    ¦j. Nahawand_____¦
¦
¦                 _______________
¦                ¦j. Jaharkah¦
C    D  E-b-     F    G      A    Bb
¦_jins Rast______¦    ¦
¦    ¦jins Bayyati____¦
¦                     G      A    B-b-    c    d
¦                     ¦___jins Rast_______¦    ¦
¦                     ¦      ¦jins Bayyati_____¦
C    D Eb         F#  G
¦____jins Nakriz______¦
```

In the present-day maqam Suzdilar is considered a simple non-compound mode:

```
  ____________    _____________
! jins Rast  !   ! j. Nahawand !
C   D  E-b-  F   G   A  Bb     c
```

Using Tetrachordal Analysis to Describe Aspects of Melodic Movement

One of the main differences between the theory of the middle and present-day subperiods is that the former attempts to describe how the modes move in practice while the latter does not (see Section J below). With the introduction of the concept of scale (sometime in the late-nineteenth century), there was a potential to lose the aspect of melody that was present in early-period descriptions of the modes. Tetrachords offered middle-period theorists a way to reintroduce melodic movement back into their discussions: When giving a tetrachordal analysis, middle-period writers comment on the order in which the various tetrachords should be played. D'Erlanger, for example, writes for maqam Hijaz,

> The performance [al-'amal] of this mode starts from the first tetrachord [Hijaz on D] entering into it from the note Rast [C] as a support to Dukah [D] and after showing this tetrachord which represents the soul of the mode there is a descent to Yakah [GG]] with a Rast tetrachord [on GG] ..., then an ascent to the second [ascending] tetrachord in order to play sometimes a Rast tetrachord on Nawa [G] and sometimes a Busalik [Nahawand] tetrachord [on G]. Following this the ascent is to the third tetrachord in order to play Busalik on Muhayyar

> [d] and from there to the fourth if possible to play Busalik on jawab Nawa [g].
>
> At the time of the descent ... [one plays] a Jaharkah tetrachord on [d], then ... a Hijaz tetrachord [on d]; following this the descent is to the second tetrachord ... with a Hijaz tetrachord on Husayni [A], then the descent is to the first tetrachord and a settling on the note Dukah [D] with a touch of Rast [C]. (1933:292)

Hijaz's tetrachords numbered in the order indicated by D'Erlanger (1933:292):

```
                           4_________    5_________
                          : Nahawand:   : Nahawand:
                          G  A Bb   c   d   e f   g
                          :             :
 2___________    1&10_____:3_________   :8_______  6________
: jins Rast  :  : j.Hijaz :jins Rast:   : j.Hijaz :Nahawand:
GG  AA BB-b- C  D Eb   F# G  A B-b- c   d eb   f# g  a bb  c
                             :          :
                             :          d  e   f# g
                             :          : Jaharkah:
                             A Bb    c# d        7
                             :jins Hijaz:
                              9
```

In contrast, tetrachords are indicated in present-day works without reference to the order or context in which they occur.

The discussion of present-day tetrachordal theory given in the preceding pages should not give the impression that there is complete agreement when it comes to the tetrachordal analysis of a given mode. In fact, disagreements arise concerning even the primary tetrachordal structures of some of the more common modes. Maqam Bayyati, for example, is commonly described today as having a Nahawand tetrachord (also called Busalik) on G as its jins al-far` (see Muhammad 1984:26; Surur 1986:131; etc.). al-Kurdi (personal communication 6/3/87), however, analyzes the maqam as having Kurd on A as its main jins al-far` and Nahawand on G as a secondary jins al-far`. al-Shawwa, a middle-period writer, defines Bayyati as having a Jaharkah tetrachord on F although he acknowledges that some analyze the mode as having a Nahawand tetrachord on G (1946:58). Finally, D'Erlanger (1933:265) presents the maqam as having Jaharkah on F in ascent and Nahawand (Busalik) on G in descent.

Four Interpretations of the Primary Tetrachordal Structure of Maqam Bayyati:

```
¦jins Bayyati¦ jins Nah.¦
D  E-b-  F   G   A Bb   c   d

¦jins Bayyati¦    ¦jins Kurd ¦
D  E-b-  F   G   A Bb   c   d

¦jins Bayyati¦
D  E-b-  F   G   A Bb   c   d
         ¦Jaharkah ¦

¦jins Bayyati¦                         ¦ jins Nah.¦jins Bayyati¦
D  E-b-  F   G   A Bb   c   d   d   c   Bb A   G   F  E-b-  D
         ¦Jaharkah ¦
```

When asked about the discrepancies in these four interpretaations Surur and al-Kurdi (two present-day theorists) admit the possibility of more than one definition for the various maqamat. They express the opinion that a composer or musician (when improvising) can avail himself of any of these interpretations, and that a definitive statement on the tetrachordal structure of a given maqam (even maqam Bayyati) can be made only with respect to a specific piece of music or a specific performance. Thus, although these two individuals each have their own understanding of Bayyati's dominant tetrachordal structure, they recognize, in the end, that a maqam is capable of assuming different tetrachordal structures at different times in response to individual interpretations and the creative urges of a particular moment. Significantly, though, neither D'Erlanger, al-Shawwa, Surur, or al-Kurdi recognize the existence of a Sikah tetrachord on E-b- in maqam Bayyati. For these four, then, there is a limit to the aspect of personal interpretation. [10]

Concluding Remarks:

Modern tetrachordal analysis, dating from the 1920s and 30s, was made possible by the earlier introduction of a scalar interpretation of the modes. Tetrachordal analysis pervades theoretical works written since the 1930s. It also plays a prominent role in the required curriculum at the main Cairo music institutes. Tetrachordal analysis is now considered an essential aspect in the definition of the individual maqamat. To know a mode is to know its tetrachordal structure. [11] Over the same period of time, however, there has been a substantial simplification in the number of tetrachords that are admitted within definitions of the individual maqamat.

NOTES FOR CHAPTER X, SECTION D

1. For a number of the modes, D'Erlanger recognizes that the fourth tetrachord might be beyond the range of the voice or instrument; thus, he comments that the fourth tetrachord should be played only "if possible."

2. Tetrachord changes which result in "non-duplication at the octave" are discussed in Section E below. Notice, in this example, that Bayyati has E-b- in the central octave but e♭ in the higher octave.

3. D'Erlanger (1949:101-104) uses the word tarkīb (pl. tarākib) as if it were a modern-day term for instances where two or more tetrachords share the same or overlapping ranges. This includes what we have called ascending/descending variants, different tetrachordal interpretations for the same scalar segment, temporary tetrachordal changes, and compound modes. A number of later Western writers use D'Erlanger as their source and indicate that the word tarkīb is a modern musical term (see Powers 1980:426 and 427; Pacholczyk 1980:523; al-Faruqi 1981:355-56; Shiloah 1981:40). In fact, tarkīb was a term with this meaning in medieval sources, i.e., in the tenth through sixteenth centuries (see al-Faruqi 1981); however, it is not a recognized term in either the written Arabic sources used for the present study or among theorists and musicians interviewed for the present study. Those interviewed, in Cairo and in the U.S., state that there is no such term.

D'Erlanger also implies recognition of a separate category of compound modes, called murakkabāt, in his 1933 work (pp.288, 290, and 308). These passages reappear in works by Mahfuz (1963:280) and al-Hilu (1971:104). Again, although such a category and term did exist prior to the modern period (see Shiloah 1981:36ff.; al-Faruqi 1981:355) and does exist today in Turkish music (Signell 1977:96ff.), in fact, neither the category nor the term is recognized in the vast majority of the Arabic sources for the present study. al-Hilu himself acknowledges this point: "In fact, in our period the fundamental maqamat are not considered to be differentiated from compound [modes]" (ibid.:87). The absence of an acknowledged category of compound modes is apparent in the following examples taken from al-Shawwa where he describes three "compound" modes without the use of any specific terminology (1946:22,71, and 58, respectively): Describing one mode, he writes, "This mode starts by playing maqam Mahur repeatedly, then it turns to maqam Suznak...." For another, "This mode, the performance in it begins with the mode Saba and ends with the structure [tarkīb] and conditions of the mode Busalik." And for another, "This maqam is composed of [murakkab min] the transposition of maqam Bayyati to G, then it descends from the note G to the note C with the structure [*tarkīb*] of the notes of the scale of Rast...." Compare these with an example from D'Erlanger (ibid.:308) where he writes that maqam Saba Kurdi is "one of the compound modes" (*min al-naghamāt al-murakkabah*).

That *murakkab*/*murakkabah* is not commonly used to refer to "compound" modes in the modern period is accented by the fact that the word is used with a different meaning in Fatah Allah et. al. (1979:29ff.) and Fatah Allah (1971; see p.119). Here, modes whose octave scales include more that eight notes are called *murakkab*. For example, maqam Rast is said to use both B-b- and Bb and is thus labeled as *murakkab*, i.e., its scale (C D E-b- F G A, Bb and B-b-, c) includes nine notes.

4. It is still common to find recently published books that present separate ascending and descending scales for each mode but these works do not usually include a tetrachordal analysis of these two scales (see ʿArafah and ʿAli 1976:23ff.; Fatah Allah and Kamil 1982:13ff.; Racy 1983,131; etc.). Tetrachordal analyses of ascending and descending scales are now rare.

5. Various stages in the shift from recognizing multiple tetrachords to recognizing only two tetrachords per octave can be seen in the literature. When D'Erlanger indicates multiple tetrachords for the modes in his 1933 work, the assumption seems to be that these tetrachords are all essential aspects of the modes' composition. In three cases, however, D'Erlanger indicates that one of the tetrachords should be treated only "as an accidental" or "as a non-essential element" (*bi-ṣifah ʿaraḍiyyah*) (pp.203, 318, and 320). In 1961, al-Hilu, who bases his analyses on D'Erlanger's 1933 work, develops this idea when he incorporates the concepts of "fundamental" tetrachords versus "accidental" or "non-essential" tetrachords (*ʿuqūd asāsiyyah* versus *ʿuqūd ʿaraḍiyyah*). Many of the tetrachords that were indicated in D'Erlanger's work as essential are here labeled as "non-essential" (compare the presentations of maqam Hijaz in D'Erlanger ibid.:292 and in al-Hilu ibid.:120). A still narrower stance is taken by Salah al-Din (1950) when he indicates alternative tetrachords for some modes but only two for a majority of the modes he discusses. In this work Salah al-Din occasionally acknowledges differences of opinion concerning the upper tetrachord (the *jins al-farʿ*) but he then dismisses all but one specific tetrachord with the comment that it is this one *jins al-farʿ* which presents the mode's true character (see pp.109,122,134,148,164,171, and 183). In a later work Salah al-Din adopts the common present-day stance completely when he gives only two tetrachords per maqam without bothering to acknowledge alternative tetrachords or different opinions.

6. Maqam Husayni is an example of the modern analysis being at odds with the middle-period understanding. Although middle-period sources recognize the G-based tetrachord in this mode, the A-based tetrachord was commonly understood to be dominant. (N.B., the name Husayni refers to the note A.) See D'Erlanger (1933:267), for example, where he states that the character of this mode is created by showing a Bayyati tetrachord on A. See Muhammad (1984:44) and Surur (1986:133) for two present-day analyses which indicate a Rast tetrachord on G but not a Bayyati tetrachord on A.

7. Surur (1986:116) cites the following work as his source for the term *al-hashw*: *al-Mawsū'ah al-'Arabiyyah al-Muyassarah* (The Accessible Arab Encyclopedia); Dār al-Qalam wa Mu'assasah Frânklīn (publishers), 1965. p.1703.

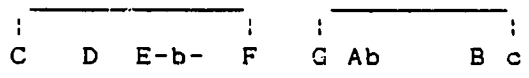
8. Nuwayrah calls the Jaharkah tetrachord by the name 'Ajam and the Nahawand tetrachord by the name 'Ushaq.

9. The concept of "compound" modes can be extended to include most of the rare maqamat. Although not traditionally viewed as "compound," these modes, it is often remarked, do not occur by themselves; rather they appear within pieces set in a related but more common mode. (Stated in terms of the *faṣīlah* system, the rare modes of a given *faṣīlah* usually occur within pieces set in the main mode of that *faṣīlah*.) Maqam Nirz, for example, can be presented as C D E-b- F G A-b- Bb c, i.e., having a Rast tetrachord on C and a Bayyati tetrachord on G. However, as it usually appears in conjunction with maqam Rast it might be more accurate to state that the mode includes both a Rast and a Bayyati (and possibly a Nahawand) tetrachord on G.

10. This does not prevent Nuwayrah and Mash'al from including a Sikah tetrachord on E-b- within their analysis of maqam Bayyati (see p. 501 above).

11. It is interesting, however, that some modes seem to lend themselves more readily to a conscious level of tetrachordal analysis than others. For example, every musician I have talked to or taken lessons from conceptualizes the existence of a Hijaz tetrachord on G in the modes Shuri and Suznak. However, I have had extensive lessons on the *'ūd* from two teachers in maqam Saba during which neither pointed out the existence of a Hijaz tetrachord on F.

maqam Suznak:



__maqam Shuri:__

```
 ____________ ___________
¦            ¦          ¦
D  E-b-  F   G Ab      B c   d
```

__maqam Saba:__

```
 __________
¦          ¦
D  E-b-  F Gb      A Bb   c db ...
         ¦__________¦
```

Perhaps this is because of the unusual fingering on the *ʿud* for the Hijaz tetrachord on F: the Hijaz tetrachord on G shares the same fingering as the Hijaz tetrachord on D (the root position for maqam Hijaz) and is thus readily perceptible as a Hijaz tetrachord. The fingering of the Hijaz tetrachord on F might serve to mask the tetrachord's augmented second. See the follow diagrams of *ʿud* fingerings.

```
   Hijaz tetrachords on D             a Hijaz tetrachord on F
(D Eb F# G) and G (G Ab B c)               (F Gb A Bb)

 c    ======================         c    =====================
 G    ==Ab============B=====         G    =======A==Bb==========
 D    ==Eb============F#====         D    ==========F==Gb=======
 AA   ======================         AA   =====================
 GG   ======================         GG   =====================
```

E. NON-DUPLICATION AT THE OCTAVE

An important aspect of the issues of ambitus and tetrachords concerns modes which do not duplicate at the octave. With the application of the concept of scale within definitions of the various maqamat and with the new importance given to the concept of tonic (see Sections A and B, above), so the roles and functions of the concepts of the octave and the octave note also changed. The octave span and the octave note were not important concepts for a vast majority of the maqamat described in early-period writings. Most of the modes were perceived as occupying ranges which did not extend to the octave note, i.e., the octave of the tonic (see Section C above). Of the small number of modes which extended beyond the octave, only a few were understood to include melodic duplication at the octave (i.e., phrases which occurred in a lower octave reoccurred in a higher octave). Mashaqah referred to these as "doubled" modes (see Chapter IX, Section C.3). "Doubled" modes were rare. Most modes, I repeat, did not even extend to the octave note, let alone go beyond this note. [1] In the middle period, all modes were conceived as extending beyond the octave note, but this note was not an important one in all cases. In many cases, three consecutive conjunct tetrachords resulted in an octave note of little importance. (In such cases, the third tetrachord begins on the minor seventh degree rather than on the octave of the tonic.) When the third tetrachord did begin on the octave note, in many cases this tetrachord was not the same as the tetrachord which was based on the tonic note. In other words, these modes' notes did not duplicate at the octave. In other cases, there was straight octave duplication. In the present period, the modes are conceived, for the most part, as single-octave scales, scales which duplicate at the octave. The octave range and the octave note are now major structural and standardizing concepts which serve to inform the vast majority of the maqamat. (Modes which retain their non-duplicating features in the present period are discussed in Section C above, and again in this section.)

Non-duplicating modes in middle-period and present-day theory can be grouped into two categories: 1) those which retain the same tonic-note orientation at the octave, but change their tetrachordal affiliation; and 2) those which, in the upper region, shift their focus to a note other than the octave of the tonic. According to middle-period sources, non-duplication may be a consistent feature or it may occur only temporarily, i.e., at specified times such as in ascent but not in descent or vice versa.

In our discussion of this phenomenon, we will focus predominantly on a number of the more commonly played modes which are said to contain non-duplication in middle-period sources but which are considered as having simple duplication in the present day: Bayyati (see p.491 above), Hijaz, Shuri (Qarjighar), Kurd, Suznak, Hijaz Kar, Shahnaz, and Huzam. For those schooled in the present day, it is indeed surprising to find these modes described as having non-duplicating features in works published as recently as 1904 (al-Khula'i) to 1974 (Farah). In this section we will discuss these and other modes by focusing on shared structural characteristics. We will also seek to ascertain why these modes lost their non-duplicating features in the present-day theory. (See Appendix 8, "Non-Duplication at the Octave; A Summary," for a summary presentation of the modes discussed in the following pages.)

Modes Which Do Not Duplicate at the Octave in Middle-Period Theory

1. Modes Which Retain the Same Tonic-Note Orientation at the Octave But Change Their Tetrachordal Affiliation

1.a. Analysis of the modes which retain the same tonic-note orientation at the octave but change their tetrachordal affiliation reveals a tendency for modes with a disjunct Hijaz tetrachord as the upper tetrachord in the first octave to begin the second octave with a Nahawand tetrachord (also called Busalik). See the following four examples:

maqam Suznak:

```
 ________________    ______________
¦ jins Rast     ¦   ¦jins Hijaz¦
¦               ¦   ¦          ¦
C    D   E-b-   F   G Ab      B c   d eb   f    g ab       b (c)
                                ¦          ¦    ¦             ¦
                                ¦_jins Nah.¦    ¦_jins Hijaz_¦
```

This is the analysis of maqam Suznak in ascent as given in the Institute report (Recueil 1934:544), D'Erlanger (1949:188), al-Shawwa (1946:44), Fahmi (1965:63), and al-Hilu (1972:108) except that they present the Rast tetrachord as a pentachord; the Institute, D'Erlanger and Fahmi also present the Nahawand tetrachord as a pentachord; the Institute and Fahmi do not include the Hijaz tetrachord on g. All five writers give Rast on c in the descending scale thus recognizing simple octave duplication in descent. All except al-Shawwa call the Nahawand tetrachord by the name Busalik. [2] al-Khula'i (1904:41) and Shalfun (1921:187) give only the notes c d eb f g in the octave (they do not mention the concept of tetrachords) and thus have non-duplication being a consistent feature of this mode.

maqam Hijaz Kar:

```
 ____________      ______________
¦jins Hijaz¦     ¦jins Hijaz¦
¦          ¦     ¦          ¦
C Db      E F    G Ab      B c   d eb   f    g ab       b (c)
                             ¦          ¦    ¦             ¦
                             ¦_jins Nah.¦    ¦_jins Hijaz_¦
```

The Institute report (Recueil 1934:546), al-Shawwa (1946:56), D'Erlanger (1949:218), al-Sabbagh (1950:46), al-Hifni (n.d.:189), Fahmi (1965:65), al-Hilu (1972:112), al-Mahdi (1972:40), and Farah (1974:84) all present this structure for maqam Hijaz Kar in ascent and/or descent (although some do not include the Hijaz tetrachord on g). They also include a Hijaz tetrachord on c either in descent or in ascent and descent and thus recognize simple octave duplication at times. Many give the Hijaz on C and Nahawand tetrachords as pentachords. al-Khula'i (1904:42) writes that the mode contains the notes c d eb f g but then adds that it sometimes uses the same notes in the second octave as are found in the first: "This procedure does not destroy the maqam." For al-Khula'i, then, non-duplication at the octave was the dominant feature for this mode.

maqam Shahnaz:

```
  __________     __________
 |jins Hijaz|   |jins Hijaz|
 |          |   |          |
 D Eb    F# G   A Bb    c# d    e f    g    a bb    c    (d)
                           |           |            |
                           |_jins Nah._|_jins Nah.__|
```

This is the analysis of maqam Shahnaz in ascent as given in the Institute report (1934:572), D'Erlanger (1949:280), al-Shawwa (1946:66), Fahmi (1965:69), and Touma (1977:45). (Some do not include the Nahawand tetrachord on g; some present the Hijaz tetrachord on D as a pentachord; Touma gives this scale but does not mention tetrachords.) All five writers have a Hijaz tetrachord on d in descent and thus recognize simple octave duplication in descent. [3]

maqam Hisar:

```
  ________________   ____________
 |    jins Hisar    | jins Hijaz |
 |                  |            |
 D     E F      G#  A Bb      c# d    e f    g    a bb    c    (d)
                                 |           |            |
                                 |_jins Nah._|_jins Nah.__|
```

D'Erlanger (1949:264), al-Shawwa (1946:75), al-Hilu (1972:130), and Touma (1977:46) give this structure for maqam Hisar in ascent and descend (D'Erlanger also includes a Bayyati tetrachord on D in descent); Touma gives this scale but does not mention tetrachords. [4]

It is not entirely clear why this non-duplicating tendency exists in these modes. It might be that the Hijaz tetrachord asserts itself as the lower tetrachord of a new entity, i.e., maqam Hijaz on G (in Suznak and Hijaz Kar) or on A (in Shahnaz and Hisar). Hijaz has a conjunct Nahawand tetrachord as its second tetrachord. Maqam Suznak might then be viewed as:

```
 ____________________
¦   maqam Suznak    ¦
¦       on C        ¦
C D E-b- F G Ab B c d eb f g ab b (c)
           ¦  maqam Hijaz  ¦
           ¦______on G_____¦
```

Maqam Hijaz Kar might be seen as:

```
 _______________
¦maqam Hijaz Kar¦
¦     on C      ¦
C Db E F G Ab B c d eb f g ab b (c)
         ¦ maqam Hijaz ¦
         ¦_____on G____¦
```

Or it may result from the strong association that the major seventh leading tone (here from B to c) has in Arab music with the Nahawand tetrachord. That is to say, the most prominent occurrences of the half-step leading tone are in conjunction with the Nahawand tetrachord (7/ 1 2 3b 4). The structures (7/ 1 2 3 4) and (7/ 1 2b 3 4) also occur but they are less common.

1.b. There is a second tendency among modes which keep their tonic-note orientation at the octave but change their tetrachordal structure, i.e., for modes with a conjunct Nahawand tetrachord in the first octave to start the second octave with another Nahawand tetrachord. See the following two examples:

maqam Bayyati:

```
  ____________ ___________
 |jins Bayyati| jins Nah.|
 |            |          |
 D  E-b-  F   G   A Bb   c   d   e f   g
                             |         |
                             |jins Nah.|
```

This analysis of maqam Bayyati in descent is found in the Institute report (Recueil 1934:561), D'Erlanger (1933:265) and Fahmi (1965:56). (D'Erlanger also indicates a Jaharkah tetrachord on f.) All three include a Bayyati tetrachord on d in ascent and thus recognize simple octave duplication in the ascending scale.

maqam Hijaz:

```
  __________ ___________
 |jins Hijaz| jins Nah.|
 |          |          |
 D Eb    F# G   A Bb   c   d   e f   g
                           |         |
                           |jins Nah.|
```

This is the analysis of maqam Hijaz in both ascent and descent as found in al-Shawwa (1946:65) and Touma (1977:45; Touma gives this scale but does not mention tetrachords). al-Hilu (1972:120) gives both Hijaz on d and Nahawand on d as alternative tetrachords thereby recognizing both octave duplication and non-duplication. D'Erlanger (1949:278) gives this structure for the mode in ascent (he also includes a Rast tetrachord on G and a Nahawand tetrachord on g), but, like al-Hilu, includes both Hijaz on d and Nahawand (Busalik) on d in descent. See also Farah (1974:87). al-Khula'i (1904:43) and Mahfuz (1964:337) recognize non-duplication but instead of indicating a Nahawand tetrachord on d they give this maqam the notes d e-b- f g, i.e., a Bayyati tetrachord on d, in both ascent and descent.

2. Modes Which Shift Their Focus in the Upper Region to a Note Other Than the Octave of the Tonic

Analysis of the modes in middle-period works which shift their focus to a note other than the octave of the tonic reveals a number of tendencies. The first of three groups of modes we will discuss are those which have three consecutive conjunct tetrachords.

2.a. <u>modes with three consecutive conjunct tetrachords</u>

The first tendency among modes with three consecutive conjunct tetrachords is for the second and third tetrachords to be Hijaz and Nahawand, respectively. This parallels a tendency discussed above with respect to the modes Suznak, Hijaz Kar, Shahnaz, and Hisar, except that in these cases the Hijaz tetrachord begins from the fifth scalar degree instead of the fourth. When the Hijaz tetrachord begins on the fourth degree, then the Nahawand tetrachord starts on the minor seventh of the scale instead of on the octave:

```
 ____________      ___disjunct___
|            |    | Hijaz tetr. |
|            |    |             |
1  - - - -   4    5 b6         7 8
                                 | conjunct |
                                 |Nah. tetra|

 ____________   ___conjunct___
|            | | Hijaz tetr. |
|            | |             |
1  - - - -   4 b5          6 b7   8
                             | conjunct |
                             |Nah. tetra|
```

When the middle of the three tetrachords is Hijaz, then the shift from an octave orientation to an orientation on the minor seventh is aided by the half-step leading tone that the Hijaz tetrachord contains, i.e., the natural sixth acts as a leading tone to the flat seventh. We offer two examples from the middle-period literature. In these examples, the Hijaz and Nahawand tetrachords together can be seen as forming the scale of maqam Hijaz from the fourth degree of the modal scales:

maqam Shuri (also called Qarjighar):

```
   ____________   ____________
 | jins Bayyati| jins Hijaz |
 |             |            |
 D  E-b-   F   G Ab        B c   d eb   f   g ab      b c  (d)
                             |              |          |
                             |jins Nahawand |jins Hijaz |
```

This is the analysis of maqam Shuri (Qarjighar) in ascent and descent as found in D'Erlanger (1949:242) and al-Shawwa (1946:64), except that both allow the Nahawand tetrachord on c to be interpreted alternatively as a Kurd tetrachord on d (in either case the mode lacks duplication at the octave). The Institute report (1934:564) has Kurd on d in ascent and Nahawand on c in descent. Touma (1977:42) gives the notes c d eb f g in ascent and descent without commenting on the tetrachords involved.

maqam Hijazi 'Ushayran:

```
    ____________   ____________
  | jins Bayyati| jins Hijaz |
  |             |            |
 AA  BB-b-   C  D Eb       F# G   A Bb   c   d  e-b-  f   g
                              |          |                |
                              | jins Nah.|   jins Rast    |
```

This is a partial presentation of D'Erlanger's analysis of this rare mode in descent (1949:136). (He also indicates a Nakriz pentachord on C and Rast tetrachord on C.) D'Erlanger also includes a Bayyati tetrachord on A in ascent thus indicating duplication at the octave in ascent.

A variation on the tendency to have the Hijaz tetrachord followed by a conjunct Nahawand tetrachord occurs when D'Erlanger presents two modes as having a Nakriz (or Nawa

Athar) pentachord instead of a Nahawand tetrachord above the Hijaz tetrachord. The main difference between the two structures is that Nahawand has a perfect fourth while Nakriz/Nawa Athar has a sharp fourth. Note that the d eb f# g of the Nakriz tetrachord in the two examples below create symmetry at the fifth with the Hijaz tetrachord that precedes it, i.e., G Ab B c is matched by d eb f# g:

maqam Huzam:

```
  ___________  ___________
 ¦jins Sikah ¦jins Hijaz ¦
 ¦           ¦           ¦
 E-b-   F    G Ab       B c   d eb     f# g ab     b c
                          ¦               ¦
                          ¦ jins Nakriz   ¦
                            ___________
```

This is D'Erlanger's version of the maqam in ascent (1949:308); he also includes a Nakriz tetrachord on F as an alternative to the Hijaz tetrachord on G.

maqam Zawq-i-Tarab (Shawq Tarab):

```
  __________  __________
 ¦jins Kurd ¦jins Hijaz¦
 ¦          ¦          ¦
 D Eb   F   G Ab      B c   d eb     f# g   a
                        ¦               ¦
                        ¦ jins Nakriz   ¦
                          ___________
```

This is D'Erlanger's version of this rare maqam in ascent (ibid.:302), except that he also includes a Hijaz tetrachord on d as an alternative to the Nakriz pentachord on c.

Another group of modes that shift their focus to the minor seventh because of three conjunct tetrachords are those in which the middle tetrachord is Nahawand. See, for example:

maqam Kurd:

```
 _________  _________
¦jins Kurd ¦ jins Nah.¦
¦          ¦          ¦
D Eb   F   G   A Bb   c    d   e-b-  f    g    a  bb   c
                      ¦                   ¦            ¦
                      ¦_____jins Rast_____¦_jins Nah._¦
```

This is the structure that the Institute report (Recueil 1934:575) and D'Erlanger (1933:303) give for the mode in descent except that the Institute report also includes Kurd on d in descent. In both sources, the mode has Kurd on d in ascent, giving simple octave duplication (the Institute does not include the Nahawand tetrachord on g).

maqam Bayyati Sultani:

```
 ____________  _________
¦jins Bayyati¦ jins Nah.¦
¦            ¦          ¦
D   E-b-  F   G   A Bb   c    d   e-b-   f    g    a  bb   c
                         ¦               ¦    ¦            ¦
                         ¦__jins Rast__¦    ¦__jins Nah._¦
```

This is the structure D'Erlanger gives for this rare mode in descent (1949:234), except that he also includes a Jaharkah tetrachord on f as an alternative to the Nahawand on g.

maqam Busalik 'Ushayran:

```
  ____________  _________
 ¦jins Bayyati ¦ jins Nah.¦
 ¦             ¦          ¦
AA   BB-b-   C   D    E F   G    A Bb   c    d    e f    g    a
                            ¦           ¦    ¦                ¦
                            ¦_jins Nah._¦    ¦___jins Nah.____¦
```

This is the structure D'Erlanger gives for this rare mode in descent (ibid.:138), except that he also includes a Bayyati tetrachord on A as an alternative to Nahawand on G (this results in simple duplication at the octave).

In the above examples of three consecutive conjunct tetachords it is interesting to observe that the base notes of the various tetrachords all correspond to the open strings of the Arab lute, the *`ūd*. The top four pairs of strings on the *`ūd* are tuned in fourths: AA, D, G, and c (a fifth string is added below the AA string; it is commonly tuned to either GG or FF). Thus it might be said that the *`ūd* lends itself to AA- and D-based modes having consecutive conjunct tetrachords. It is perhaps significant, then, that the above examples do not include any GG or C based modes, for in these modes the open strings give the fifth and the octave above the tonic instead of the fourth and the minor seventh.

2.b. non-duplication resulting from overlapping tetrachords

A second group of modes which shift their focus from their tonic note in the octave are those which are interpreted as having overlapping tetrachords. (These include modes with Saba-related structures; such modes are discussed in Chapter X, Section C.)

maqam Farah Faza:

```
 ______________                               ____________
 ¦jins Nahawand¦                              ¦ jins Kurd¦
 ¦             ¦                              ¦          ¦
GG   AA  BBb   C   D Eb    F   G   A Bb   c    d eb   f   g
          ¦               ¦           ¦          ¦
          ¦__jins `Ajam___¦jins `Ajam¦jins `Ajam¦
```

This is the structure given in D'Erlanger (1949:126) for the mode in ascent; see similar presentations in the Institute report (*Recueil* 1934:126), al-Hilu (1972:95), Fahmi 1965:71) and elsewhere. Note that the modal scale in this example duplicates at the octave. According to these middle-period theorists, the performer would ignore this aspect of octave duplication in favor of the above indicated non-duplicating structure when playing the mode in ascent.

maqam `Ajam:

```
 ____________
¦jins Bayyati¦
¦            ¦
D  E-b-  F   G   A  Bb   c   d  eb   f   g   a bb
         ¦          ¦                ¦          ¦
         ¦jins `Ajam¦  jins `Ajam    ¦jins `Ajam¦
```

This is the structure D'Erlanger gives for this rare mode in ascent (ibid.:250). (Maqam `Ajam is more commonly conceptualized as based on BBb.) D'Erlanger adds a Bayyati tetrachord on d in descent thus giving octave duplication in the descending scale (he calls the `Ajam tetrachords on F and f by the name Jaharkah).

See also the modes Hawzi and Nawa (D'Erlanger 1949:238 and 254, respectively) which are given an initial tetrachord followed by a conjunct pentachord, followed by an overlapping tetrachord that starts on the minor seventh above the tonic.

2.c. <u>non-duplication at the octave in BB-b- and E-b- modes</u>

A third group of modes which shift their focus from the tonic note in the octave are modes based on BB-b- and E-b-. In our discussion of ambitus in the present-day period (Section C above), we saw that these modes are often given a ninth note above the tonic in order to complete their third ascending tetrachord, usually a Rạst tetrachord on D or G. In the middle period, these same modes often deviate from simple duplication at the octave in two ways: first, when indicating a fourth tetrachord these writers often do not mention a Sikah trichord at the octave but rather follow the Rast tetrachord (here a pentachord) with a new conjunct tetrachord. In the absence of the Sikah trichord, these modes lack tetrachordal duplication. For example:

maqam Rahat al-Arwah:

```
 _____________ _____________
|jins Sikah|jins Hijaz |
|          |           |
BB-b-  C   D Eb      F# G   A  B-b-  c   d eb     f#  g   a
                        |                |                 |
                        |___jins Rast____|___jins Hijaz____|
```

This is the presentation of the mode in ascent as found in al-Shawwa (1946:36), D'Erlanger (1949:168), and al-Hilu (1972:103). In descent they indicate a Nahawand tetrachord on G (this is discussed below). The Sikah trichord on B-b- is omitted in both ascent and descent.

D'Erlanger gives similar presentations (i.e., omitting a repetition of the initial Sikah tetrachord at the octave) for the modes Farahnak (a BB-b- mode; p.162), Bastah Isfahan (BB-b-; p.166), Huzam (E-b-; p.308), Mayah (E-b-; p.312), and Awj (BB-b-; p.160). (With regard to maqam Awj, however, he adds the comment, "Treat, first of all, the third tetrachord affecting some stops on B-b-...."; p.160.)

al-Hilu also omits the octave of the initial Sikah tetrachord in the modes Sikah and Huzam:

maqam Sikah:

```
 __________ ______________
|  Sikah  | jins Rast    |
|         |              |
E-b-  F   G   A   B-b-   c   d  e-b-  f    g   a  b-b-  c
                         |                 |            |
                         |___jins Rast_____|__jins Rast_|
```

This is al-Hilu's presentation of the mode in ascent (1972:131), except that he gives the initial Sikah tetrachord as extending to the note A, and thus gives the first and second tetrachords as overlapping instead of conjunct. He also adds a Sikah (Awj) tetrachord on B-b-.

maqam Huzam:

```
 _________ ____________
|  Sikah  | jins Hijaz |
|         |            |
E-b-  F   G Ab      B  c   d  e-b-   f   g ab      b  c
                       |                 |            |
                       |___jins Rast_____|_jins Hijaz_|
```

This is al-Hilu's analysis of the mode in ascent and descent (1972:132), except that he presents the initial Sikah tetrachord as extending to the Ab, and thus gives the first and second tetrachords as overlapping instead of conjunct. When extended to include Ab, however, the Sikah tetrachord is more accurately called a Huzam tetrachord.

A second way in which these same modes often deviate from simple duplication at the octave is when their third tetrachord, the Rast on D or G, is replaced in descent by a Nahawand tetrachord, i.e., the third degree of the tetrachord changes from half-flat to full-flat (B-b- to Bb or e-b- to eb). As these two half-flat notes (B-b- and e-b-) are the tonic note at the octave in their respective modes, the switch to the full-flat (Bb or eb) creates a neutral octave, i.e., an octave diminished by a quarter step. For example:

maqam `Iraq:

```
 __________ ____________
|jins Sikah|jins Bayyati|
|          |            |
BB-b-  C   D  E-b-  F   G   A Bb    c   d  e-b- f  g  a  b-b-
                        |               |  |                |
                        |_jins Nahawand_|  |___jins Sikah___|
```

This is D'Erlanger's presentation of the mode in descent (1949:159). The Institute report (<u>Recueil</u> 1933:537) and Fahmi give this presentation for the descending mode except that the fourth tetrachord is given as Bayyati on d. al-Hilu (1972:102) recognizes a Sikah (Awj) tetrachord on B-b- which changes to an `Ajam tetrachord on Bb in descent; thus he includes the change from B-b- to Bb without calling for a Nahawand tetrachord on G. al-Shawwa (1946:33) does not mention the change to Bb or Nahawand on G.

maqam Rahat al-Arwah:

```
 __________ ___________
¦jins Sikah¦jins Hijaz ¦
¦          ¦           ¦
BB-b-  C   D Eb      F# G   A  Bb  c   d eb      f# g   a
                        ¦              ¦                ¦
                        ¦_jins Nahawand¦__jins Hijaz____¦
```

This is the structure for the mode in descent as found in the Institute report (Recueil 1934:538), D'Erlanger (1949:168), al-Shawwa (1946:36), Fahmi (1965:68), and al-Hilu (1972:103). All give Rast on G in ascent; the Institute and Fahmi also give Sikah on B-b- (Awj) in ascent. (D'Erlanger also includes a Bayyati tetrachord on d as an alternative to Hijaz on d.) al-Shawwa indicates the notes for the Nahawand tetrachord but does not name this tetrachord. al-Khula'i (1904:45) states that this mode has Bb and sometimes B-b-.

```
maqam Huzam: _________ ___________
            ¦  Sikah  ¦ jins Hijaz ¦
            ¦         ¦            ¦
            E-b-  F   G Ab       B c   d  eb  f
                                   ¦          ¦
                                   ¦_jins Nah.¦
```

This is al-Shawwa's analysis of maqam Huzam in ascent and descent (1946:85) but he adds that Rast on c and Sazkar on c (c d# e-b- f) are also used. Kamil (1975:67) also presents maqam Huzam as including both B-b- and Bb.

The appearance of the Nahawand tetrachrd in Huzam amd Rahat al-Arwah can be seen as further examples of the tendency to follow a Hijaz tetrachord with a conjunct Nahawand tetrachord. In fact, Fatah Allah et al. (1979:94) present the note eb in Huzam as an extension of the Hijaz tetrachord on G but then indicate only a Rast tetrachord on c; i.e., they do not mention a Nahawand tetrachord on c.

D'Erlanger also indicates the Rast to Nahawand switch for the maqamat Bastah Isfahan (p.166), Awj (p.160), Farahnak (p.162), and Dilkash Hawran (p.164), all BB-b-modes; for the last three he includes both the Rast and Nahawand tetrachords in descent.

Analysis of Which Modes Retain and Which Lose Their Non-Duplicating Features in the Present-Day Theory

The above examples of modes which do not duplicate at the octave in middle-period sources are all conceived as having simple duplication at the octave in the present-day period. The only modes which are consistently understood to retain non-duplicating features in the present day are those with Saba-related structures (see discussion of these modes in Chapter X, Section C, above). The question, then, arises, "What is the essential element or elements in the Saba-related modes which have allowed them to retain this feature?" This element or elements would have to be absent in the other modes, rendering them "defenseless" against the prevailing conceptualization of the maqamat as duplicating at the octave.

The most common tetrachordal structures for modes in the present-day theory are: two conjunct tetrachords followed by a whole step; two disjunct tetrachords separated by a whole step; and a pentachord followed by a tetrachord (see separate discussion below of the BB-b- and E-b- modes):

```
 _________  _________
¦         ¦          ¦
1 - - -   4 - - -   b7   8
 _________      _________
¦         ¦    ¦         ¦
1 - - -   4    5 - - -   8
 _______________ _________
¦               ¦         ¦
1 -  -  -  -    5 - - -   8
```

It seems that the essential element in the Saba-related modes which allows them to retain their non-duplicating feature is the fact that they deny the above structures in significant ways. In contrast, the modes which fail to retain the non-duplicating feature either "take no stand" against these standard structures or else take only a very weak stand. For example, the maqamat Suznak, Hijaz Kar, Shahnaz, Hisar, Bayyati and Hijaz, when presented as not duplicating at the octave in middle-period sources, take no stand against the standard conjunct or disjunct structures. This, one might hypothesize, has left them defenseless in the present-day period against the common conceptualization of the maqamat as duplicating at the octave:

```
maqam Suznak:   ____________     ___________
               ¦ jins Rast  ¦   ¦ jins Hijaz¦
               C   D  E-b-  F   G Ab       B c    d eb    f    g
                                             ¦ jins Nah. ¦

maqam Hijaz Kar: ___________     ___________
               ¦ jins Hijaz ¦   ¦ jins Hijaz¦
               C Db       E F   G Ab       B c    d eb    f    g
                                             ¦ jins Nah. ¦
```

maqam Shahnaz:

```
 ____________      ___________
| jins Hijaz |    | jins Hijaz|
D Eb      F# G    A Bb      c# d    e f    g
                               |_jins_Nah._|
```

maqam Hisar:

```
 _________________  ___________
|    jins Hisar    | jins Hijaz|
D    E F        G# A Bb      c# d    e f    g
                                |_jins_Nah._|
```

maqam Bayyati:

```
 ____________  __________
|jins Bayyati| jins Nah.|
D  E-b-  F   G   A Bb    c     d   e f    g
                               |jins_Nah.|
```

maqam Hijaz:

```
 ____________  __________
| jins Hijaz | jins Nah.|
D Eb      F# G   A Bb    c     d   e f    g
                               |jins_Nah.|
```

Other modes take a weak stand by basing their third tetrachord on a note other than the tonic in the octave but without removing the possibility of the more common interpretation:

maqam Shuri (Qarjighar):

```
 ____________  __________
|jins Bayyati|jins Hijaz|
D  E-b-  F   G Ab      B c   d eb    f    g
                         |jins_Nahawand__|
```

maqam Kurd:

```
 ____________  __________
|  jins Kurd | jins Nah.|
D Eb     F    G   A Bb    c   d e-b- f    g
                          |___jins_Rast___|
```

maqam Farah Faza:

```
  _____________
 |jins Nahawand|
GG    AA   BBb   C    D Eb    F    G    A Bb    c    d eb    f    g
           |___jins_`Ajam___|jins_`Ajam|jins_`Ajam|
```

While Shuri's attempt to establish three consecutive conjunct tetrachords is supported by the B natural leading tone to c, the whole step which follows the two initial tetrachords is in keeping with the standard duplicating structure of two conjunct tetrachords followed by a whole step. Maqam Kurd's structure contains no obvious support for asserting the note c over the note d. In fact, the note d has significant support in maqam Kurd because the mode can alternatively be analyzed as containing parallel Kurd tetrachords on D and A (thus emphasizing the tonal centers D, A, and d). As with Shuri, Farah Faza contains half-step leading tones (AA-BBb and A-Bb) to support this overlapping and non-duplicating tetracordal structure; it also contains parallel `Ajam tetrachords. However, parallel Nahawand tetrachords also occur based on GG and C (and G and c) and it is this simple duplicating analysis which predominates in the present day.

These situations are well contrasted by the structures found in four Saba-related modes, Saba, Saba Zamzamah, Shawq Tarab and Bastanikar. The modes Saba and Saba Zamzamah deny the standard tetrachordal structures by using Gb and db; thus, neither conjunt nor disjunct interpretation is possible. (Saba Zamzamah has the same notes and structure as maqam Saba except that it uses Eb instead of E-b-.) In fact, the notes Gb and db play a major role in asserting a new structure: they act as upper leading tones for the notes F and c, respectively; these notes in turn function as base notes for the second and third tetrachords.

```
maqam Saba:      ____________
                ¦ jins Saba ¦
                D  E-b-   F Gb     A Bb    c db      e f
                         ¦jins Hijaz¦     ¦jins Hijaz ¦
```

In a similar way, maqam Shawq Tarab denies the standard conjunct tetrachord analysis by virtue of its diminished second tetrachord. Rather than starting at the octave, the third tetrachord starts on the mode's minor sixth degree :

```
maqam Shawq Tarab:
      ____________  __________
    ¦  jins Kurd   ¦jins Saba ¦
   AA    BBb    C   D  E-b-  F Gb     A Bb     c db     e f
                            ¦jins Hijaz¦      ¦jins Hijaz¦
```

Similarly, maqam Bastanikar denies the common structure for BB-b- and E-b- modes. The standard tetrachordal structure for these modes in the present day is a trichord, followed by a conjunct tetrachord, followed by two notes which complete the octave; this structure is understood to duplicate at the octave.

```
      __________  ______________
     ¦          ¦               ¦
     BB-b-      D               G     B-b-
      __________  ______________
     ¦          ¦               ¦
     E-b-       G               c     E-b-
```

Of these features, Bastanikar includes only the initial trichord:

maqam Bastanikar:

```
          __________ __________
         ¦jins Sikah¦jins Saba ¦
        BB-b-  C    D  E-b-  F Gb     A Bb    c db    e f
                            ¦jins Hijaz¦      ¦jins Hijaz¦
```

In contrast, the other BB-b- and E-b- modes which are presented as not duplicating at the octave in middle-period sources preserve all or most of the standard features for BB-b- and E-b- modes and are thus, it seems, defenseless against the prevailing interpretation of simple octave duplication. The maqamat Rahat al-Arwah, Sikah, and Huzam, for example, contain all the standard features, i.e., an initial trichord, a conjunct tetrachord and two additional notes which complete the octave:

maqam Rahat al-Arwah:

```
          __________ __________
         ¦jins Sikah¦jins Hijaz ¦
         BB-b-  C   D Eb     F# G   A  B-b-  c    d
                                ¦___jins Rast____¦
```

maqam Sikah:

```
          _________  __________
         ¦  Sikah   ¦ jins Rast  ¦
         E-b-  F    G   A  B-b-  c   d  e-b-  f    g
                                 ¦___jins Rast____¦
```

maqam Huzam:

```
          _________  __________
         ¦  Sikah   ¦ jins Hijaz ¦
         E-b-  F    G Ab      B  c   d  e-b-  f    g
                                 ¦___jins Rast____¦
```

When, in BB-b- and E-b- modes, the third tetrachord is changed to Nahawand, the initial trichord and the conjunct tetrachord are still preserved. This is apparently sufficient for the common duplication-at-the-octave analysis to assert itself in the present day; i.e., the period-day theory does not recognize the Nahawand tetrachord in the following examples:

maqam Rahat al-Arwah:

```
 __________ ___________
¦jins Sikah¦ jins Hijaz ¦
BB-b-  C  D Eb     F# G   A  Bb c   d
                      ¦_jins Nahawand¦
```

maqam `Iraq:

```
 __________ ___________
¦jins Sikah¦jins Bayyati¦
BB-b-  C  D  E-b- F   G   A Bb  c   d
                      ¦_jins Nahawand¦
```

maqam Huzam:

```
 __________ ___________
¦jins Sikah¦ jins Hijaz ¦
E-b-  F   G Ab      B  c   d  eb f   g
                      ¦_jins Nahawand¦
```

Three other Saba-related modes take no stands against the common conjunct and disjunct tetrachordal structures, and are thus often presented as duplicating at the octave in present-day sources. When these modes retain their non-duplicating structures, it seems to be because of the rareness of the Hijaz tetrachord on F and the strong association this tetrachord has with the structure of maqam Saba (wherein the Hijaz on F is followed by a second Hijaz tetrachord on c):

maqam Tarz Nuwin:

```
¦ jins Kurd ¦ jins Hijaz¦
C Db    Eb   F Gb       A Bb   c db      e f
                               ¦jins Hijaz ¦
```

maqam Nahawand Sinbulah (Nahawand Murassa`):

```
¦ jins Nah. ¦ jins Hijaz¦
C     D Eb   F Gb       A Bb   c db      e f
                               ¦jins Hijaz ¦
```

maqam Shawq Afza:

```
 ¦jins `Ajam¦
BBb   C   D Eb   F Gb      A Bb   c db     e f
                ¦jins Hijaz¦     ¦jins Hijaz¦
```

In summary, when middle-period theorists gave definitions of the individual maqamat which included two-octave or nearly two-octave scales and complex tetrachordal analyses, they were introducing many levels of complexity that were not present in the early-period maqam definitions. One of the more striking features of middle-period definitions is the prevalence of modes which have non-duplication at the octave (as either a temporary or a consistent feature). In the present-day theory, a new understanding of modal structure and modal ambitus was developed in which all but a few modes are not conceived as single-octave scales which duplicate at the octave. This new development was undoubtedly influenced by Western scalar theory, a theory which plays are major role in present-day Arab music education. It also resulted because of a desire for a new simplified theory that would be easily excessible to masses of students at newly established public schools and public music institutes.

It should be pointed out that Arab theorists have not noted this change in their music theory. With the exception of Mashaqah's statement about "doubled" modes (see Chapter IX.C.3), Arab theory does not make a distinction between modes which duplicate at the octave and modes which do not duplicate. There are no terms for referring to these two categories of modes. The few modes which retain non-duplicating features in the present-day theory stand as a reminder of the more complex understandings which existed at an earlier stage in twentieth-century Arab music theory.

As for which modes lost and which modes retained their non-duplicating features, the following seems to have been the deciding factor: in order for a mode to retain non-duplicating features in the present day theory, it could not contain significant aspects of the standard conjunct or disjunct tetrachordal structures which inform a majority of the modes in the present day. Rather, as in the cases of the maqamat Saba, Saba Zamzamah, Shawq Tarab, and Bastanikar, these modes must deny the standard conjunct and disjunct structures in significant ways. (See Appendix 8 for a summary presentation of the modes discussed in this section.)

NOTES FOR CHAPTER X, SECTION E

1. Mashaqah describes fifteen of ninety-five modes as clearly extending beyond the octave of the tonic note. Of these, only nine seem to contain duplication at the octave. Three of these nine are explicitly stated to be "doubled" modes ([c.1840] 1899:302).

2. In the following pages we will refer to tetrachords with the structure 1 2 3b 4 as Nahawand tetrachords. This is in keeping with the common practice in Cairo today. However, many of the authors cited called this tetrachord by the name Busalik.

3. al-Khula'i (1904:46) calls Shahnaz a transposition of maqam Hijaz Kar; for Hijar Kar he indicates that non-duplication is the dominant feature but that simple duplication can occur without harming the mode. The Institute report and Fahmi contain an apparent typographical error in their presentations of this mode since the d tetrachord, labeled "Busalik" (1 2 3b 4), is transcribed in Western notation with an eb instead of an e natural.

4. al-Khula'i (ibid.:42) seems to agree that this mode does not duplicate at the octave although he does not say so explicitly: Hisar is said to be a transposition of maqam Nawa Athar. Nawa Athar is, in turn, compared to maqam Nahawand with the comment that the former has the same structure as the latter except for the use of F# (called Hijaz) instead of F (Jaharkah). Nahawand is given with the notes C D Eb F G and c d eb f g in the octave; thus, Nawa Athar apparently has the notes C D Eb F# G and c d eb f g, i.e., non-duplication at the octave. Hisar, being a transposition of Nawa Athar to the note D, would have the same feature. However, it must be emphasized that al-Khula'i's comments on transpositions are not completely reliable: see p.44, for example, where he says that maqam Sikah is equivalent to maqam Kurd transposed to E-b-.

F. RECOGNIZING PROMINENT NOTES OTHER THAN THE TONIC AND ITS OCTAVE

This section discusses ways that theorists and musicians conceptualize prominent notes other than the tonic and its octave for each mode. In order to clarify the issue, it is beneficial to consider the possibility that there is a total absense of any perception of prominent notes besides the tonic and its octave. If this were the case, then knowledge of a given maqam would not inform the composer or improviser as to which notes he should emphasize and which he should not emphasize. A maqam would be a succession of notes of equal importance. This undifferentiated sense of a mode's notes would be an extreme manifestation of the present-day tendency to equate maqam with scale. A second possibility would be that theorists and musicians recognize certain notes in each mode as being prominent, others as being not prominent. Were this the case, then knowledge of a given maqam would tell the composer or improviser which notes to emphasize and which not to emphasize. We might refer to this second possibility as recognizing the maqamat to have "weighted" scales.

In the following pages, I address this issue in two parts. The first part examines ways that theorists and musicians recognize a single prominent note other than the tonic and the tonic in the upper octave. Then, the following part discusses ways that theorists and musicians recognize more than one prominent note, again besides the tonic and its octave, for each mode.

1. RECOGNIZING A SINGLE PROMINENT NOTE OTHER THAN THE TONIC AND ITS OCTAVE (THE CONCEPT OF DOMINANT)

Introduction

Explicit recognition of a single prominent note other than the tonic and its octave is found in only a few of the written sources for the present study. This recognition has centered on the use of the term *ghammāz*. Although the term has existed throughout the modern period, its definition has changed significantly from the beginning of the period to the present day. The term first appears in our sources in Mashaqah ([c.1840] 1899:297) where it carries a meaning closely approximating the Western concept of "dominant"; i.e., the *ghammāz*, recognized as the note second in importance only to the tonic and its octave, was always the note a fifth above a mode's tonic. In the twentieth century, the meaning of the term was modified to allow for it to refer to other degrees of the scale besides the fifth so that it could better reflect the particular characteristics of the individual maqamat. Today, the *ghammāz* is defined in terms of each mode's particular tetrachordal structure (see below). While the term is generally known only in academic circles (it is taught in the present day at the music institutes in Cairo), it is not uncommon for musicians to acknowledge a single note other than the tonic and its octave which predominates in each of the main maqamat. They do so by using any of a number of common Arabic words.

Ghammaz As Perfect Fifth

Mashaqah introduces the term ghammāz in a passage in which he is explaining the intervals found in the fundamental scale. Noting that the same interval (the interval of a fifth) exists between the notes C and G, D and A, E-b- and B-b-, and F and c, he writes,

> If the first of [these notes] is the tonic of the mode [qarār al-laḥn], they call the second of the two its ghammāz because it is the closest corresponding note except for the octave, since [the octave's] relationship to the tonic is the closest relationship. If any [note] were struck and its octave were struck after it, it would be the most pleasing [of sounds] to the listener. After that in pleasure is the plucking of the ghammāz. The interval between the ghammāz and the tonic is always fourteen quarters-steps. ([c.1840] 1899:297; 1913:75).

Mashaqah offers two examples in order to illustrate the concept. The ghammāz of the note E-b-, he tells us, is B-b-; the ghammāz of AA is E (ibid.:298).

```
E-b-      F      G      A      B-b-
     3       4      4      3          =  14

AA      BB-b-      C      D      E
   3           3      4      4        =  14
```

In his presentations of the individual maqamat later in the same work, Mashaqah refers to the concept of ghammāz on only one occasion. Surprisingly, the term is used to refer to the fifth above a note which is not itself a tonic pitch: discussing the mode Saba Chawish (ibid.:884), which uses the same notes as the modern-day maqam Saba (D E-b- F Gb A Bb c db), he comments that since the note G [Nawa] is not used, so "the use of its ghammāz which is the note d [Muhayyar] is dispensed with and instead of it the note db [Shahnaz] is used ... because it is the ghammāz of the note Gb [Hijaz] which took the place of G [Nawa]." (See also ibid.:630.)

The idea that the ghammāz was restricted to the interval of a fifth from the tonic is carried into the twentieth century when al-Khula'i includes a slightly edited version of Mashaqah's definition of the term in his own work (1904:34-37). al-Khula'i makes no further reference to the concept of ghammāz.

Ghammaz As Fifth, Fourth, or Third

D'Erlanger (d.1932) discusses the concept of "dominant" to which he says "some Arab musicians attribute ... the name of ghammāz" (1949:105-106):

> We know that the name of dominant is attributed in modern European music to the fifth degree of a scale when it is a perfect fifth from the tonic or the first note. The dominant constitutes the culminating point of the melodic movement, the most salient degree of the melody.
>
> The dominant of an Arab mode is generally the fifth from its tonic...; but it is sometimes also its fourth or its third. (ibid.)

In his presentations of the various maqamat in the 1932 Congress publication, D'Erlanger identifies the _ghammāz_ with respect to only two modes. The note F is called the _ghammāz_ of maqam 'Ajam or 'Ajam 'Ushayran, a BBb-based mode (1933:187 and 203), and the note D is called the _ghammāz_ of maqam Sultani Yakah, a GG-based mode (ibid.:189). In both cases, then, the _ghammāz_ is a fifth from the tonic. D'Erlanger does not mention the concept at all when presenting the modes in his 1949 work.

al-Hilu, writing in 1961, defines _ghammāz_ as either the fifth or four degree of a modal scale:

> Every maqam has a _ghammāz_; it is absolutely necessary. The _ghammāz_ is the fifth note after the first note of the maqam. For example, the first note of maqam Rast is Rast [the note C], thus its _ghammāz_ is the note Nawa [G]. And the first note of maqam Bayyati is Dukah [D], thus it [the _ghammāz_] is Husayni [A]. And the first note of maqam Sikah is Sikah [E-b-], thus its _ghammāz_ is Awj [B-b-], etc.
>
> But there are exceptions to this rule in the two musics, Arab and Turkish, since it is in the constitution of some maqamat that their _ghammāz_ is located on the fourth note, not the fifth, in spite of the fact that this fifth, which the Europeans call _quinte_, is established as a general principle in the musics of the world.
>
> But the fourth note does not occur as the

> ghammāz except in accordance with the character of the maqam and the domination of this fourth note more than the fifth over the character and the color of the maqam, and in accordance with the position of the intervals of the notes of its first tetrachord, and the frequency of appearance of this note and its repetition in performance until it occurs with frequency, occasionally exceeding the fundamental note and the octave [of the tonic] of the maqam. (1961:79)

In his presentation of the individual maqamat, al-Hilu mentions ghammāz with respect to only three modes, suggesting that the concept is, perhaps, not as important as he initially claims it is. In all three cases, the ghammāz is a fifth from the tonic note. [1]

Another writer, Qasis, closely matches D'Erlanger's definition of ghammāz. He writes that every mode has

> a note [which is] prominent and dominates over its other notes [musayṭarah ʿalá darajātiha al-ukhrá]; this note is called the ghammāz. It is in most cases the fifth from the tonic of the maqam and is sometimes also the third or the fourth of some modes. (n.d.:211)

He does not, however, mention the term in his discussions of individual modes.

Ghammaz Freed From Intervallic Confines

The term ghammāz appears freed from any specific intervallic restrictions in the proceedings of the Committee on Mode, Rhythm, and Composition within the 1932 Congress publication. Here, the term is not explicitly defined; rather, the new definition is discernible from the way the term is used in a discussion of the concept of starting note.

> It is not necessary to confine the composer to starting from any [specific] note, be it with respect to any maqam, on the condition of that he takes into consideration the _ghammāz_ of the mode (its dominant) which is not necessarily the fifth (_quinte_) from the tonic in Arab music. The meaning of this is that the composer in maqam Muhayyar, for example, in which the beginning is held to be from the note Muhayyar [d], it is not necessary that he starts from it, rather he has the total freedom whenever he wants to compose in this maqam to make use of any note which is near to its _ghammāz_ and which is harmonious with it. (_Kitab al-Mu'tamar_ 1933:134-135)

This passage seems to say that the _ghammāz_ of maqam Muhayyar, a D-based mode (see ibid.:142), is the note d, i.e., the octave of the tonic note. Since this maqam is commonly said to focus most predominantly on the note d (Muhayyar is the name of both the mode and the note d), it seems that the concept of _ghammāz_ is here used to isolate the note which produces the dominant character of the mode, no matter what its intervallic relationship is with the tonic note. [2]

The committee's understanding of the _ghammāz_, especially its freeing the concept from any specific intervallic restriction with respect to the tonic, appears again in a definition of the term offered by Muhammad in 1984. But here we also find a new point, namely the linking of the concept of _ghammāz_ with tetrachordal theory, for now the _ghammāz_ is, "in most cases," equated with the lowest note of a mode's second tetrachord, the jins al-far`.

> Every maqam ... has a ghammāz. The ghammāz is the note which is widely used in the course of the melody and is considered as the point of modulation and of departure to other tetrachords and in most cases it is the note from which the jins al-far` begins (without the restriction that it be the third or fourth or fifth degree). Further, the ghammāz is next to the tonic note in importance in the course of the melody. (Muhammad 1984:21)

Muhammad, a teacher at the Kulliyat al-Tarbiyyah in Cairo, explicitly names the ghammāz for many of the modes she discusses. From an examination of Muhammad's work and from a number of interviews with other theory teachers at Cairo music institutes, it is possible to summarize the present-day understanding of the placement of the ghammāz as follows. According to present-day tetrachordal theory, most C-, D-, and E-b- based modes begin their second tetrachord on the note G. (This means that most C-based modes have either disjunct tetrachords or an initial pentachord, most D-based modes have conjunct tetrachords, and most E-b- modes have an initial trichord followed by a conjunct tetrachord. See diagram on p.496 of Chapter X, Section D.) G, then, is the ghammāz for these modes. [3] See the following list of C, D, and E-b- modes based on Muhammad's work. The modes are organized by fasīlah.

<u>maqam</u>	<u>ghammaz</u>	<u>jins al-far'</u>
Rast (C)	G	Rast on G
Rast Suznak (C)	G	Hijaz on G
Rast Suzdülar (C)	G	Nahawand on G
Nirz Rast (C)	G	Bayyati on G
Rast Mahur (C)	G	'Ajam on G
Rast Bishayir (C)	G	Kurd on G
Nahawand (C)	G	Hijaz on G
Nahawand Kurdi (C)	G	Kurd on G
Nahawand Kabir (C)	G	Nahawand on G
Tarz Jadid (C)	G	'Ajam on G
Nawa Athar (C)	G	Hijaz on G
Nakriz (C)	G	Hijaz on G
Bisandidah (C)	G	Rast on G
Bayyati (D)	G	Nahawand on G
Husayni (D)	G	Rast on G
Bayyatayn (D)	G	Bayyati on G
Shuri (D)	G	Hijaz on G
Kurd (D)	G	Nahawand on G
Hijaz (D)	G	Nahawand on G
Hijaz Awij (D)	G	Rast on G
Sikah (E-b-)	G	Rast on G
Sikah Mayah (E-b-)	G	Nahawand on G
Musta'ar (E-b-)	G	Nahawand on G
Huzam (E-b-)	G	Hijaz on G

Exceptions to the general tendency of having G as <u>ghammāz</u> fall into four categories. First, there are the BBb-based modes which, generally analyzed as having disjunct tetrachords, have F as <u>ghammāz</u> ('Ajam 'Ushayran, for example).

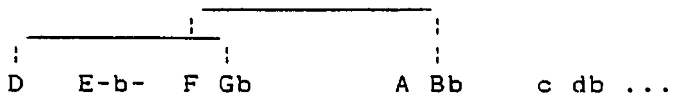
<u>'Ajam 'Ushayran:</u>

```
   _____________         ____________
  |            |        |            |
 BBb    C    D Eb       F     G     A Bb
```

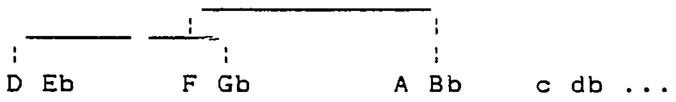
Second are the Saba-related modes which establish their second tetrachord on F instead of G. These include the

D-based modes, Saba and Saba Zamzamah, and the C-based modes Tarz Nuwin and Nahawand Murassa' (also called Nahawand Sinbulah).

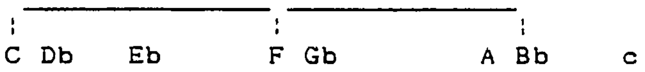
Saba:



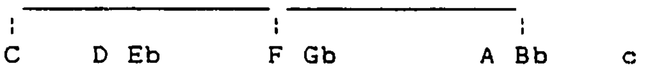
Saba Zamzamah:



Tarz Nuwin:

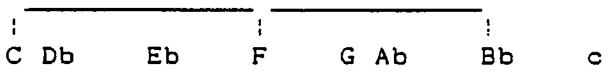


Nahawand Murassa':



Third are a small number of C-based modes which are considered to have conjunct tetrachords (Hijaz Kar Kurd is occasionally analyzed in this fashion) and a small number of D-based modes which are understood to have disjunct tetrachords (Shahnaz, for example). The former would have F as ghammāz, the latter would have A.

Hijaz Kar Kurd:



Shahnaz:

```
      _______________   _____________
      ¦              ¦  ¦             ¦
      D Eb        F# G  A Bb       c# d
```

Fourth are a small number of modes in which the third ascending tetrachord (occasionally called *jins far‘ al-far‘*) is deemed to be more important that the second tetrachord. In maqam Dalanshin, for example, the Saba tetrachord on A is considered more important that the Rast tetrachord on G, thus A can be considered the *ghammāz* of this mode. And in maqam Muhayyar, the Bayyati tetrachord on d is commonly held to be more important than the Nahawand (or Rast) tetrachord on G; thus, the *ghammāz* of this mode might to be said to be d (see the statement to this effect in the 1932 Congress publication; quoted above). Taking these exceptions into consideration, the *ghammāz* might best be defined as "the starting tone for the second most important *jins* of a maqam" (al-Faruqi 1974:100). (See also a discussion, below, of the possibility of recognizing more than one *ghammāz* per mode. According to this practice, the A and G in maqam Dalanshin, for example, could be considered as alternative *ghammāz*-s.)

maqam Dalanshin:

```
 _________________      _________________
¦  jins Rast     ¦    ¦  jins Rast     ¦
C    D   E-b-    F    G    A   B-b-    c db ...
                           ¦__jins Saba__¦
```

maqam Muhayyar:

```
  ______________    _____________
 : jins Bayyati   :jins Nahawand:
 D   E-b-    F    G    A   Bb   c    d   e-b-   f    g
                                     :__jins Bayyati_:
```

Ghammaz, A Rare and Little-Used Term

It must be emphasized that *ghammāz* is a rare and little-used term. It is not mentioned in a majority of the modern-period theoretical works, for example, in al-Hifni (1946), al-Shawwa (1946), Salah al-Din (1950), al-Sabbagh (1950 and 1954), Mahfuz (1963-64), *al-Halqah* (1964), Fahmi (1965), Hafiz (1971), al-Mahdi (1972), Farah (1974), Kamil (1975), Touma (1977), or Mash`al (n.d.). Nor is it mentioned in any of the practical works (method books or books of musical transcriptions) which, it will be remembered, often include introductions which teach some aspects of Arab music theory. From D'Erlanger's comment that "some Arab musicians attribute to the dominant the name of *ghammāz*" (1949:106), it is clear that the term was not widely used during the period immediately prior to 1932 (the year of his death). A number of later Western writers have ignored this point and given the impression that the term is in common use among "contemporary performers and theorists" (see, for example, al-Faruqi 1981,170). This is incorrect.

In present-day Cairo, the term *ghammāz* exists only in the music institutes. Students are required to identify the ghammāz for each maqam they have studied in their theory classes. Surur notes, "Musicians outside the institutes do not know or use this term" (personal communication 6/1/87). The truth of this statement was evident in interviews conducted in Cairo in 1987 with musicians, music teachers, and government officials involved in music education. Those not directly associated with the main institutes of music had never heard of the term ghammāz in connection with Arab music. Similarly, Racy reports that the term is not commonly known in Lebanon (personal communication 6/86). Ghammāz is, however, the only existing Arabic term for naming a single prominent note other than the tonic and its octave.

This is not to say that the concept of a single prominent note other than the tonic and its octave does not exist among musicians unfamiliar with the term ghammāz. On the contrary, the existence of such a prominent note is inherent whenever the modes are conceived as composed of two (or more) tetrachords. Tetrachordal conceptualizations are acknowledged by most musicians in the present day (see Chapter X.D). In addition, musicians who do not know the term ghammāz are often ready and able to discuss the idea of a second prominent note by using a number of common adjectives. For example, this note is described as being musaytirah (that which dominates, rules), shā'i`ah (widespread), qawiyah (strong), or muntashirah (widespread, predominant).

The Origins of "Ghammāz"

al-Faruqi gives the literal definition of the word ghammāz as "that which makes the eye blink, i.e., that which pleases" (1981:78). D'Erlanger writes that the term is "no doubt an allusion to the attraction exercised by this degree on the others of the scale; this word signifies, in effect, 'that which winks the eye' [qui cligne de l'oeil], as for to call, to attract, or as for to respond to a call" (1949:106).

The term ghammāz is a peculiar one for at least two reasons. For one, when ghammāz first appears in the modern period (Mashaqah c.1840), it has a meaning which seems more appropriate for describing the Western sense of dominant than the Arab sense. Defined as the fifth above the tonic, the ghammāz fails to recognize the importance of the fourth in many D-based modes and the third in many E-b- modes. Since there is no evidence that the term existed prior to the modern period, it is possible that the concept was originally adopted in imitation of the Western concept of dominant, and that it was not until the twentieth century that the term was redefined so as to better reflect the concept of dominant as it existed in Arab music. A second unusual point about the term ghammāz concerns the roots of the word itself. Present-day theorists interviewed in Cairo in 1987 expressed puzzlement over the word whose literal meaning has, for them, no clear association with its use in music theory. Further research is needed on the origins of the concept and on the roots of the word ghammāz.

2. RECOGNIZING MORE THAN ONE PROMINENT NOTE BESIDES THE TONIC AND ITS OCTAVE

Discussions about more than one prominent note (besides the tonic and its octave) for each maqam can be divided into two groups; namely, those based on tetrachordal analysis and those not based on tetrachordal analysis.

a. Multiple Notes of Prominence Based on a Mode's Tetrachordal Structure:

Since the revival of tetrachordal theory in the early decades of the twentieth century a number of theorists have recognized pitch hierarchy to be a natural element of tetrachordal structure. Minimally, this has meant the recognition of two notes of prominence: The base note of a mode's first tetrachord is generally acknowledged as the predominant note. It is also the tonic of the mode. The base note of the second tetrachord is then acknowledged as the second most important note (disregarding the tonic in the upper octave). This note is occasionally called the ghammāz. While many recognize only these two tetrachords and thus only one prominent note besides the tonic, others commonly recognize additional tetrachord(s) and thus one or more additional notes of prominence.

D'Erlanger was the first among our sources to discuss multiple notes of prominence: After presenting the concept of ghammāz he writes,

> Besides the tonic, the scale of a mode comprises other stopping points on which the composer should affect some momentary pauses. It is a question of the initial notes of the tetrachords which compose the modal scale. These notes serve as finals of some portions of the composition and constitute, as it were, secondary tonics. These pauses should, however, be less marked than the reposes on the principal tonic which is the initial [note] of the first tetrachord. (1949:108) [4]

al-Faruqi seems to base her presentation of this same subject on the above passage in D'Erlanger. She writes,

> The maqam is also distinguished by the importance accorded those tones which are starting tones for the [secondary tetrachords]. These receive emphasis within [the] exposition of their _jins_ by means similar to those accorded the _qarār_ [i.e., the tonic]. They act therefore as secondary tonics and are called _marākiz_ (s. _markaz_, 'center point'). (1974:99)

Although al-Faruqi here considers the _ghammāz_ to be one of the _marākiz_ (since it is "the starting tone for the second most important jins of the maqam" [ibid.:100]), elsewhere she includes "_markaz_ or secondary notes of stability" in a list that also includes "tonic" and "ghammāz," thus suggesting that the _marākiz_ occupy a third level in the overall pitch hierarchy (see 1981:170). Powers (1980:427) does the same, listing _qarār_, _ghammāz_ and _markaz_ separately, translating them as 'final', 'predominant' and 'medial'.

D'Erlanger takes his analysis a step further when he comments:

> To each of these secondary tonics which are the initial [notes] of the tetrachords which compose a scale correspond, as a matter of course, a dominant [which he says some call _ghammāz_], a leading tone [_sensible_], and some complimentary notes generally belonging to that scale - so that each tetrachord presents itself as an independent mode. (1949:108) [5]

Surur and al-Kurdi refer to the first notes of a mode's secondary tetrachords as *ghammāzāt*, the plural of *ghammāz* (personal communication 6/18/87 and 6/15/87, respectively). The main *ghammāz*, called the *al-ghammāz al-asāsī*, *al-ghammāz al-aṣlī*, or *al-ghammāz al-rā'isī*, is the starting note of the *jins al-far`* in most modes. The starting tones of any additional tetrachords would be secondary *ghammāzāt*, and might be differentiated by being called *al-ghammāz al-thānī*, *al-ghammāz al-thālith*, etc. (literally, the second *ghammāz*, the third *ghammāz*, etc.). [6] For example, in maqam Huzam, G is commonly considered the main *ghammāz*, and c a secondary *ghammāz*:

maqam Huzam:

```
 jins al-aṣl jins al-far`
¦jins Sikah ¦ jins Hijaz ¦
¦           ¦            ¦
E-b-   F    G Ab      B  c    d   e-b- (f)
                         ¦                ¦
                         ¦___jins Rast____¦
```

al-Kurdi (ibid.) offers the following analysis for maqam Kurd. He says that A is the main *ghammāz*, G the second *ghammāz*, and F the third *ghammāz*:

maqam Kurd:

```
 jins al-aṣl       jins al-far`
¦ jins Kurd ¦    ¦ jins Kurd  ¦
¦           ¦    ¦            ¦
D Eb    F   G    A Bb     c    d
        ¦   ¦             ¦
        ¦   ¦ jins Nah.   ¦
        ¦ jins Jah. ¦
```

Theoretically speaking, the tonic in the upper octave can also be considered a ghammāz. However, this designation is usually avoided unless the mode changes tetrachordal affiliation at the octave. For example, in maqam Dalanshin, Surur points out that the note c can be considered a secondary ghammāz (ibid.):

maqam Dalanshin:

```
   jins al-aṣl
¦ jins Bayyati  ¦         ¦  jins Saba  ¦
¦               ¦         ¦             ¦
C    D   E-b-   F    G    A   B-b-   c db       e f
                                     ¦            ¦
                                     ¦ jins Hijaz ¦
```

Suspended Tetrachords

D'Erlanger includes a variation on the above use of tetrachordal analysis for identifying prominent notes. When emphasis is given to the top note of a tetrachord rather than to the bottom note, then "... the tetrachord is called 'suspended' (<u>mu`allaq</u>) ..." (1949:108). Although D'Erlanger applies this term on only one occasion--with reference to the rare maqam, `Ajam Muraṣṣa` 1933:290)--it is a useful concept, specifically when one tries to explain the prominence given to the note Bb in a number of modes where the first-note-of-a-tetrachord interpretation is not applicable. This occurs, for example, in maqam Bayyati and maqam Saba in phrases which encompass the region from F to Bb or c (rather than the region of the tetrachord which ascends from the note Bb, i.e., Bb-eb). Using D'Erlanger's concept of a suspended tetrachord, one can analyze these modes as containing a suspended tetrachord based on F; i.e., a tetrachord which focuses on its top note, Bb. (This recalls the issue of whether a maqam can have its tonic on the top of its octave scale; see Chapter X, Section A.) [7]

```
maqam Bayyati:                jins Jaharkah
                              |"suspended"|
                D    E-b-     F     G     A Bb    c     d


maqam Saba:                   |jins Hijaz |
                              |"suspended"|
                D    E-b-     F Gb        A Bb    c     d
```

b. Presentations of Multiple Notes of Prominence Not Based on Tetrachordal Analysis

al-Shawwa (1946:96-99) discusses the concept of prominent notes without reference to a mode's tetrachordal structure. (The main focus of this discussion is an attempt to develop a theory governing modulation among the various maqamat.) He states that every tonic pitch has a group of notes which stand in close relation to it. Calling these latter notes the aqārib (literally, "relatives"), he states that three aqārib are most important. These are the notes which stand a third, fourth, and fifth from the tonic. The third, he writes, has to adhere to one or more conditions in order to be considered one of the aqārib. (He does not state any conditions for the fourth and fifth, however, we might assume that these need to be at perfect intervals from the tonic.) The third would be one of the aqārib if it were one of the notes of the fundamental Arab scale (GG AA BB-b- C D E-b- etc.); if it is not, it would still qualify if it filled two conditions: First, the third would have to be a minor third from the tonic (al-Shawwa writes that it would have to be at an interval of six quarter-steps from the tonic). Thus, in a mode based on C, if the third is not E-b- then it would have to be Eb. And second, the note below this third must be a major second. al-Shawwa offers maqam Nahawand (C D Eb ...) as an example of a mode which fulfills these two conditions and thus "it is permitted to use [the third] and to center on it" (ibid.:97). Maqam Hijaz Kar Kurd (or Kurdili Hijaz Kar) (C Db Eb ...), however, is given as an example of a mode which does not fulfill the necessary conditions.

al-Shawwa then adds that the sixth degree of a mode can also be considered one of the aqārib under certain conditions (ibid.:97). He gives as examples the Bb in the maqamat Bayyati, Saba, and Hijaz. It is noteworthy that he does not allow a "centering" on either the second or seventh degrees of a scale under any circumstances.

Touma also discusses the phenomenon of secondary notes of prominence. Touma analyzes the structure of taqāsīm performance (the solo improvisatory instrumental genre) and finds that a modal scale consists of a number of different regions, each "centered on a principal note around which the neighboring notes effect a rotary embroidery ... [T]he pivot-note plays an extremely important role since it serves to support [the performance of that region]" (1977:53-54).

Calling each of these regions a "phase in the development of a maqam" (ibid.:52), Touma concludes, "The totality of these phases constitute the form of the maqam which is defined by the succession of the pivot-notes" (ibid.:54). Touma offers the following examples: Bayyati has the pivot-notes D, F, and G. 'Ushaq Turki, which shares the same scale as Bayyati, is formed by the pivot-notes C, D, and G. Three other examples are given without being assigned a maqam name: D, F, and Bb is probably maqam Saba; E-b-, G, and c is undoubtably Sikah and Huzam; and C, F, and G might be maqam Nahawand or Rast.

Touma does not mention tetrachordal structure as a factor in determining the occurrence of pivot-notes in a given mode, however it is likely that many of his pivot-notes will, upon examination, be found to coincide with the base notes of the mode's tetrachordal structure. For example, maqam Bayyati it is commonly acknowledged to have Bayyati on D as its *jins al-aṣl*, Nahawand on G as its *jins al-far'*, and Jaharkah on F as one of its additional tetrachords, thus accounting for Touma's three pivot-notes, D, G and F.

A number of performers interviewed for the present study also acknowledge a sense of pitch hierarchy without referring to tetrachordal analysis. When discussing this idea they often rely on a number of common adjectives or else rate the notes numerically rather than use any established terminology. For example, notes might be rated by using the adjectives "strong" (m. *qawī*; f. *qawiyah*) and "weak" (m. *ḍāʿif*; f. *ḍāʿifah*). Additional adjectives (for example, *qawī jiddan* [very strong] and *qawī jiddan jiddan* [very very strong]) or inflexions of the voice are often used to give relative stress to these words.

ʿAbdullah al-Kurdi, *qānūn* player and teacher of *qānūn* and music theory, gave the following pitch hierarchies for six commonly played modes (personal communication 6/3/87). (The tonic notes, given in parentheses, are not included as they are, according to al-Kurdi, understood to be the strongest note of the mode.):

	strongest	2nd	3rd	4th	weak
maqam Rast (C):	G	E-b-	F	A	D and B-b-
maqam Bayyati (D):	A	G	F	Bb	E-b- and c
maqam Kurd (D):	A	G	F	Bb	Eb and c
maqam Hijaz (D):	A	G	Bb		Eb, F#, and c
maqam Saba (D):	F	A(*)	c	Bb(*)	E-b- and Gb
maqam Huzam (E-b-):	G	c	F		Ab, B, and d

(*: Bb is stronger in ascent, A is stronger in descent)

It is noteworthy, here, that once again the second and seventh degrees of each mode are consistently considered to be weak. Standing only the interval of a second away from the tonic and octave notes, it seems that the second and seventh would unacceptably detract from the role and function of the tonic and octave notes if they were emphasized. (This idea reoccurs in the realm of modulation; see Chapter XI.)

Terms Used For More Than One Prominent Note

D'Erlanger (1949:100), citing the authority of "the teachings of the modern masters", uses the term marākiz (s. markaz; literally, "center, office") to refer to all "passing, momentary or secondary stopping points." Jargy (1971:58) and Shiloah (1981:40) quote D'Erlanger's use of this term. al-Faruqi (1974:99-100 and 1981:173) and Powers (1980:427) seem to use D'Erlanger as their source when they also use this same term.

In fact, the term appears in only two of the Arabic-language sources surveyed for the present study. D'Erlanger uses the term on three occasions in his 1933 work: A is called a markaz of the AA-based mode, Hussayni 'Ushayran (p.191); D is a markaz of the D-based mode, 'Ardibar (p.207); and F is called the most important markaz of maqam Saba, a D-based mode (p.297). The only other person to use the term is al-Hilu and this only when he copies D'Erlanger regarding the modes Husayni 'Ushayran (1972:98) and Saba (ibid.:122). Of the musicians and theorists interviewed in Cairo in 1982-3 and 1987, only one knew that the word was recognized, by some, as a term in Arab music theory. A teacher of Arab music theory and a Ph.D. in Arab music, Surur said that he came across this word in the New Grove Dictionary. "But I have never heard it being used. We do not use the word" (Surur, personal communication 6/1/87).

Surur and al-Kurdi readily admit that ghammāzāt, another term for the same concept, is known in Cairo only at the institutes of music. Interviews conducted in 1987 confirm this point. Racy comments that neither marākiz nor ghammāzāt are commonly recognized as musical terms in Lebanon (personal communication 6/30/86).

For the majority of theorists and musicians who acknowledge a sense of pitch hierarchy, there are no established terms for discussing this phenomenon. Indeed, discussions of the concept are not at all common. If we are to assume that pitch hierarchy is an implicit element of tetrachordal analysis, then it is in the more pervasive tetrachordal analyses of the maqamat that the idea is most commonly found. When the question arises as to which of the recognized tetrachords is more important, then it is within this rating of the tetrachords that we find a rating of the various base notes.

Variant Interpretations Regarding Prominent Notes

As is the case with tetrachordal analyses, ratings of the various prominent notes by different individuals often reveal variant interpretations for the same maqam. For example, while al-Kurdi states that A is the main *ghammāz* and G the second *ghammāz* in maqam Kurd (see above), others give the reverse. In this case Surur and al-Kurdi, two Cairo performers/theorists, accept both interpretations, saying that the choice is up to the composer or performer. In the case of maqam Nahawand, D'Erlanger (1933:249) indicates that the mode has a tetrachord built on F in ascent, but while in descent, it has tetrachords on both F and G in descent, thus adding a contextual factor to the consideration of pitch hierarchy. In some cases, variant interpretations are rejected with the comment, "This is not our sense of the mode." This was Surur's reaction to al-Hilu's definition of maqam Shawq Afza, for example (personal communication 6/18/87). al-Hilu (1972:101) analyzes maqam Shawq Afza as having a Nawa Athar pentachord on Eb, thus suggesting that the note Eb is emphasized.

Shawq Afza (al-Hilu):

```
  ____________  ________________
 ¦ jins `Ajam ¦ jins Nawa Athar ¦
 ¦            ¦                 ¦
BBb     C    D Eb    F Gb     A Bb ...
```

However, the common analysis for this mode in Cairo gives primary emphasis (after the tonic BBb) to the F, and then secondary emphasis to the D. Eb is not considered an important note:

Shawq Afza (present-day Cairo):

```
  ___(main)___       __(second)__
 ¦ jins `Ajam ¦     ¦ jins Hijaz ¦
 ¦            ¦     ¦            ¦
BBb     C    D Eb   F Gb       A Bb ...
             ¦jins Saba¦
             ¦Zamzamah_¦
               (third)
```

While many theorists and performers acknowledge a clear sense of pitch hierarchy for the main modes, many also state that at the time of performance or composition individual creativity can come into play and bring out a different sense of pitch hierarchy. Surur (ibid.) gives an example by playing a taqāsīm in maqam Rast which emphasizes the notes G, F, E-b-, D, and C, each in turn. In the standard definition of the mode, he explains, the note D is not considered an important note in maqam Rast. However, the composer or the performer of taqāsīm is free to emphasize this note, thereby creating a degree of aesthetic tension between the standard and realized versions of the mode. Surur and al-Kurdi both point out that, while they each have a personal sense of pitch hierarchy for the main modes, an absolute sense of right or wrong is possible only when one is analyzing a specific piece of music.

In conclusion, whether expressed in terms of tetrachordal theory or by using common words or acknowledged terminology, it is clear that the idea is widely held that the modes have prominent notes other than the tonic and its octave. The prevalence of these concepts among theorists and musicians confirms that the Arab modes cannot be equated simply with "scale." The maqamat have "weighted" scales. While there is a great deal of commonality concerning the relative importance attributed to the notes in the most common modes, disagreements regarding some of the specifics reveal that the maqamat cannot be definitively explained with a single definition. Rather they are dynamic entities which allow for individual interpretation.

NOTES FOR CHAPTER X, SECTION F

1. al-Hilu's three statements about the *ghammāz* in individual modes are as follows. First, he copies D'Erlanger's comments regarding the *ghammāz* in `Ajam `Ushayran (1972:95 and 100). Second, he says that the *ghammāz* of maqam Bayyati, a D-based mode, is A (ibid.:118). (See below where it is pointed out that present-day writers and informants in Cairo state that the ghammaz of Bayyati is G.). And third, he writes that the "principal" *ghammāz* of maqam `Ushaq al-Masri, a D-based mode, is A (p.126). (See the discussion in part B, below, on the idea that there can be more than one *ghammāz* per mode.)

al-Faruqi (1981:78) cites al-Hilu (1961:79) as her source when she defines *ghammāz* as a note "located a fifth, a fourth, or a third above the tonic." However, al-Hilu does not mention the interval of a third in the copy of his 1961 work at the Dar al-Kutub in Cairo, nor is it mentioned in the 1972 reprint of the same work that is in my possession.

2. It is unfortunate that the committee offers only a single example to clarify its understanding of the concept of *ghammaz*. There are very few modes which have a single note (other than the tonic) which is so essential to evoking the character of the maqam as the d is in maqam Muhayyar. Most notably, the modes Kirdan, Awj, and `Ajam are all "named after" their octave note (c, B-b-, and Bb, respectively) and are understood to center most prominently on this note.

3. G is clearly the most common note to function as *ghammāz* in the present day. Viewed from the perspective of maqam definitions contained in middle-period works, it is also clear that the prominence given to the note G today represents a simplification of the understandings that existed in the middle period. This point is discussed further in Chapter X, Section D, above.

4. Earlier in the same work, D'Erlanger had given the term *al-marākiz* for these "passing, momentary or secondary stopping points" (1949:100), however, he does not repeat the term in this passage. Unfortunately, D'Erlanger does not clarify the relationship between the *ghammāz* (which he defines without reference to tetrachordal structure) and these *marākiz*. See below where al-Faruqi considers the *ghammāz* to be one of the *marākiz*. This might be what D'Erlanger had in mind.

5. According to the present-day school of Arab music theory (which, for the most part, recognizes only two tetrachords per octave), if one is to recognize the existence of a dominant for the second tetrachord, the *jins al-far'*, it would be the tonic in the upper octave for most C- and D-based modes. In the middle period, some D modes were interpreted as having the structure D-G/G-c/c-f where the dominant of the second tetrachord was c instead of d; however, this interpretation is not found in the present day where focus on c can only result from the structure D-Gb/F-Bb/c-f as in maqam Saba. The dominant of the second tetrachord would be the neutral sixth in most E-b- modes: E-b- modes are commonly built E-b- -G/G-c/c-f.

6. On one occasion, al-Hilu (1972:126 n.1) refers to a note as "the principal ghammaz" (*al-ghammāz al-asāsī*), thus suggesting that he too recognizes the possibility of more than one *ghammāz* per maqam.

7. D'Erlanger includes another variation on the standard tetrachordal analysis when he analyzes some modes as containing tetrachords which rest on a note other than their first (or lowest) note. See, for example, the modes Rawnaq Numa (1949:172) and Nishabur (ibid.:320) which he gives as containing Jaharkah tetrachords on D which settle on the note E. (See also ibid.:170,192,242,and 238, for other instances where emphasis on an internal degree is indicated.) This idea is also found in Fatah Allah (1971:81ff.) and Fatah Allah et al.(1979:91).

G. NOTES BELOW THE TONIC (INCLUDING LEADING TONES)

Notes below the tonic, including leading tones, are treated as a separate issue in only a small number of modern-period sources. Comments from throughout the period suggest that while such notes have been considered an essential feature in many modes, they have been regarded as non-essential (or even non-existent) in others. In the case of the former group of modes, notes below the tonic, by necessity, have been clearly defined. In the case of the latter group, ambiguity has often surrounded the notes which occur below the modes' tonic pitches. Perhaps as a result of this situation, Arab music theory has avoided a systematic analysis of notes below the tonic. Among the sources for the present study, only Mahfuz (1963 and 1964) indicates the notes below the tonic for each of the modes he discusses. Following the other extreme, most present-day theorists mention such notes for just a few of the dozens of maqamat that they discuss. Comments from present-day musicians, however, reveal that Arab music theory fails to record details about notes below the tonic which are common knowledge in the realm of performance. The following pages will analyze both presentations about such notes found in theoretical works from the three modern sub-periods and also the understandings expressed by present-day musicians.

Notes Below the Tonic in the Early Period

Mashaqah describes the melodic movement of ninety-five modes by giving a specific melodic phrase for each mode ([c.1840] 1899:727ff. and 1913:87ff.). Only thirty-four of these melodic phrases include one or more notes below the tonic. For instance, a D-based mode called Dukah, 'Ushaq al-Atrak ('Ushaq of the Turks), and often Bayyati, is given the line D C D C D C G F E-b- D D D C D - E-b- - F - G - A - Bb G F - E-b- D (1899:883); i.e., only the note C is indicated below the tonic. And a C-based mode, Hijazkar, is given as C G - Ab G - F - E D-b- C GG C (ibid.:730); i.e., melodic movement descends a fourth below the tonic to GG.

We must assume that use of the notes below the tonic was obligatory where indicated and was either optional or perhaps prohibited where not indicated. Mashaqah himself comments on this point only once. After describing maqam Sikah (a mode based on E-b-) as descending to include the note C, he turns to maqam Musta'ar and presents a melodic line that does not descend below the E-b- tonic. To this Mashaqah adds the comment, "There is no descent in it to the note [C]" (ibid.:928). Another example of a mode which does not descend below the tonic is the C-based maqam, Nakriz: "It is that you start with G, then F#, E-b- distinctly, then A, G distinctly, then F# E-b- D C" (ibid.:729; 1913:90).

From Mashaqah's phrases, we also learn where in the unfolding of a given mode notes below the tonic are said to occur. In the examples above, maqam Dukah uses such notes at the beginning while Hijaz Kar uses them at the end. Other modes use these notes in the middle of their melodic progression. Still others remain predominantly below their tonic note throughout their movement. These are modes in which the tonic appears at or near the top of their overall ambitus. 'Ajam, a Bb-based mode, for example, is given as Bb - c d Bb A Bb G F Eb D followed by a return and closing on Bb (1899:899 and 932).

Notes Below the Tonic in Middle-Period Works

In middle-period works where the modes are defined, in part, in terms of specific scales, it is common for a mode's scale to be presented as ascending from the tonic note without any reference to notes below the tonic (see D'Erlanger 1933 and 1949; the report of the Institute of Oriental Music, Cairo, in Recueil 1934:529ff.; al-Shawwa 1946; etc.). It is only in prose comments which accompany these scales that mention is made of notes below the tonic. [1] A review of these prose passages reveals that, as was the case in the early-period theory, a large number of modes are presented as not using notes below the tonic. al-Shawwa, for example, indicates such notes for only twenty-two of the 108 modes he discusses. [2] al-Hilu (1961:94ff.) mentions them for only seventeen of thirty-two modes. In D'Erlanger's 1949 work, notes below the tonic are explicitly indicated for fifty-seven of 119 modes. [3]

In an interesting example of the importance of notes below the tonic, al-Khula`i (1904) identifies two pairs of modes which are said to differ from each other only in their leading tones: After describing the C-based maqam Rast, he comments, "If the note Kawasht [BB] is used ... instead of the note `Iraq [BB-b-] in the descent, then it is called maqam Rahawi" (ibid.:41). And regarding maqam `Ushaq, he writes that "... it is the same ... as maqam Busalik [both D-based modes] except that they differ by the use of the note Rast [C] in maqam `Ushaq and the use of the note Zirkulah [C#] in maqam Busalik, nothing more" (ibid.:43).

As with the melodic phrases contained in early-period works, middle-period descriptions also indicate exactly when notes below the tonic are supposed to appear in the performance of each mode. According to these descriptions, most modes use these notes only within a performance's final cadence. D'Erlanger, for example, writes,

> The musician has only to touch in passing these complimentary degrees before the final repose on the tonic ... The role of these appoggiaturas is, in effect, only to emphasize the melodic conclusion, to give more character to the final cadence (qaflah). (1949:107)

For example, in comments for maqam Nawa Athar, a C-based mode, D'Erlanger indicates that one should start with the notes F# and G, and then treat each of the mode's constituent tetrachords, first in ascent and then in descent. (These tetrachords are based on C, G, c and g, respectively.) Then he adds: "Touch [BB] before the final repose on the tonic [C]" (1949:214). Similarly, for maqam Nahawand, we are told to treat the first, second, third, and fourth tetrachords in ascending and then descending order and then, "Touch [BB, AAb, and GG] before the final repose on the tonic [C]." (ibid.:208). In all, forty-one of the fifty-seven modes which are said to use notes below the tonic in D'Erlanger's work do so only at the final cadence. [4]

Examples of the use of notes below the tonic at the beginning of a mode's movement are contained in descriptions given for the modes Hijaz and Rast. Hijaz is said to begin by linking together both its first tetrachord based on the tonic D and an auxiliary pentachord based on GG (D'Erlanger 1949:278). The C-based Rast is said to begin and end by treating the notes GG, AA, BB-b-, and C (ibid.:178).

As for the many modes for which notes below the tonic are not indicated in middle-period works, only D'Erlanger seems to address the issue when he writes, "The use of the leading tone and of the other complimentary notes [below the tonic] is not always obligatory; it often depends only on the fantasy of the composer" (1949:108). According to D'Erlanger, then, when not explicitly indicated, the use of notes below the tonic is not prohibited. Rather, use of these notes remains an option available to the composer or improviser. It seems, then, that notes below the tonic are explicitly indicated only for those modes in which such notes are considered obligatory. [5] Unfortunately, this understanding is not explicitly stated in D'Erlanger (1933 or 1949) or in the writings of Mashaqah, al-Shawwa, al-Hilu, and Mahfuz. It is interesting in this regard that for fifteen of the forty-seven modes for which D'Erlanger (1949) does not indicate notes below the tonic, the accompanying taqāsīm do in fact contain one or more such notes. (D'Erlanger provides a transcribed taqāsīm for each mode he discusses; these were probably composed and transcribed by 'Ali Darwish.) Mashaqah's comment (quoted above) that the E-b- mode Musta'ar does not descend to the C is the only explicit remark in the literature which prohibits use of notes below the tonic. [6]

Notes Below the Tonic in the Present-Day Theory

As far as music theory is concerned, the present-day stance (an unspoken one) regarding notes below the tonic can be summarized as follows: Notes below the tonic are part of the available range for all maqamat (perhaps, with the exception of GG-based modes). It is assumed that these notes are clearly defined; in all but a few cases they are the same notes as occur in a mode's central octave, manifested an octave lower. This is in keeping with the common present-day understanding of modal ambitus, i.e., that the maqamat are single-octave phenomena which can be repeated in any other available octaves. In keeping with this stance, present-day writers ignore the region below the tonic for all but the few modes which are recognized as exceptions to this general rule. This point is substantiated by the following chart:

author:	mentions notes below the tonic for:					
al-Hifni (c.1946)	---	0	of	24	modes;	
al-Sabbagh (1950)	---	5	"	90	"	
al-Halqah (1964)	---	0	"	c.53	"	
Fahmi (1965)	---	0	"	27	"	
Qasis (n.d.)	---	3	"	61	"	
Kamil (1975)	---	4	"	41	"	
Muhammad (1984)	---	4	"	72	"	(plus other E-b-/BB-b- modes?)
Masha'al (n.d.)	---	0	"	25	"	
Surur (1986)	---	4	"	62	"	

In addition to these sources, it is common for method books and books of musical transcriptions to make no mention of notes below the tonic in pages which give the scales of the various maqamat ('Arafah and 'Ali 1976; Fatah Allah and Kamil 1982; Qatr n.d.; Jabaqji 1976; 'Iffat n.d.; etc.).

I offer two examples of maqamat which duplicate the notes of the central octave below the tonic. Maqam Rast is commonly presented as C D E-b- F G A B-b- c. Although no mention is made of the notes below the tonic, one is supposed to understand that the notes G, A, and B-b- reoccur as GG, AA, and BB-b- below the tonic. Maqam Kurd is presented as D Eb F G A Bb c d and is understood to have the notes GG, AA, BBb, and C below the tonic. (GG is the lower limit in these discussions because it is considered to be the first note of the standard two-octave range for Arab music.)

Of the few modes which are acknowledged in the present day as exceptions to the general rule of octave duplication below the tonic, the most commonly mentioned are Sikah and Busalik. Sikah is generally presented as having the scale E-b- F G A B-b- c d e-b-, to which writers commonly add that the mode uses D=/= or D# instead of D below the tonic. The same D=/= or D# leading tone is also mentioned as a feature of other E-b- modes, such as Musta'ar, Mayah, and occasionally, Huzam. Maqam Busalik, commonly presented as D E F G A Bb c d, is usually given an additional comment indicating that the note below the tonic is C# instead of C. The following chart is a comprehensive list of the modes for which seven present-day writers indicate notes below the tonic:

Notes Below the Tonic Indicated in Seven Present-Day Works:

	Salah al-Din	al-Sabbagh	Qasis	Kamil	Surur	Muhammad	Farah
GG:							
Sultani Yakah						FF#	
BB-b-:							
Farahnak	GG&AA						
C:							
Rahawi	BB				GGAABB-b-	BB	
Nakriz		BB					
Nawa Athar				BB-b-			
D:							
Busalik	C#		C#	C#		C#	
Busalik compounds	C#						
'Ushaq Turki	C						
'Ushaq Masri			C				GGAABBbC
Hijaz Humayun		C#			C#		
Isfahan			C				
E-b-/BB-b-:							
Sikah	D#	D#		D=/=	D#	D=/=	
Huzam		D#				?	
Sha'ir	D#					?	
Mayah					D#	?	
Musta'ar	D#			D=/=		?	
'Iraq		AA#				?	
F:							
Jaharkah		E, occ.ly					

"?" = Muhammad seems to imply but does not explicitly state that all modes which begin with a Sikah trichord use either the D=/= or AA=/= leading tone (their tonics being either E-b- or BB-b-)(1984:15).

In the present-day period, it is commonly assumed that notes below the tonic can be used at various times in the performance of every mode. This stands in contrast to the understanding presented in early- and middle-period works where the occurrence of such notes is often indicated for a specific segment of a mode's melodic development (i.e., the beginning, middle, and/or the end). In the present day, for example, taqāsīm (the solo instrumental improvisatory performance of a maqam) are commonly understood to start with a presentation of the tonic region; one or more notes below the tonic will generally be used in this initial stage. As the taqāsīm continues, progressively higher regions of the mode are presented with intermittent cadences on the tonic. During these and a final cadence on the tonic one or more notes below the tonic will commonly be employed (personal communication from numerous Cairo musicians).

Notes Below the Tonic in Present-Day Practice: A More Complex Reality

An examination of notes below the tonic in present-day practice and as expressed by present-day musicians reveals a more complex picture than the one presented in modern-day theory books. For example, there are many instances where the theory ignores exceptions to the assumption that modes have simple duplication in the lower octave. There are also instances where the theory ignores disagreements as to which notes are used below a mode's tonic.

Perhaps the most prominent example of theory ignoring the lack of octave duplication below the tonic concerns maqam Bayyati. In the present-day Bayyati is commonly presented as D E-b- F G A Bb c d without comment as to its notes below the tonic (see Salah al-Din 1950:134; Farah 1974:84; Kamil 1975:62; `Arafah and `Ali 1978:23; Fatah Allah and Kamil

1982:14; Muhammad 1984:26; Surur 1986:131; etc.). Musicians and theorists interviewed for the present study, however, universally acknowledge that the notes below the tonic are not GG AA BBb and C (the notes of the central octave repeated in the lower octave) but rather GG AA BB-b- and C. [7]

The modes Suznak and Shuri offer parallel examples of the lack of attention given to notes below the tonic. Both have Hijaz tetrachords as their <u>jins al-far'</u>:

```
maqam Suznak:  _______________       ___________
              |  jins Rast     |    |jins Hijaz |
              |                |    |           |
              C    D    E-b-   F    G Ab       B c

maqam Shuri:   _______________ ___________
              |  jins Bayyati | jins Hijaz|
              |               |           |
              D   E-b-   F    G Ab      B c     d
```

Because of the absence of any comments to the contrary in the literature, one would expect simple octave duplication in the lower octave; i.e., a Hijaz tetrachord on GG (GG AAb BB C). However, performers and theorists interviewed all agree that both of these modes use the notes GG AA BB-b- and C. [8]

The lack of attention in the most recent literature to notes below the tonic also ignores instances where there is a lack of agreement concerning the notes in this region. This is the case for the C-based modes, Nawa Athar, Nakriz, and Nahawand. D'Erlanger (1949:214) writes that Nawa Athar uses BB before closing on the tonic C. Kamil (1975:58), however, states that Nawa Athar uses BB-b-. Maqam Nakriz is described as using BB by al-Sabbagh (1950:43), BB-b- by D'Erlanger (1949:255), and BBb, BB-b-, and BB by Mahfuz (1963:282). Of these writers, only Mahfuz comments on the variety of AA used in either of these modes: Nawa Athar uses AAb, part of a Hijaz tetrachord on GG (1964:309); Nakriz uses AA with the BBb, part of a Nahawand/Busalik tetrachord on GG (both of these create simple octave duplication in their respective modes).

Concerning maqam Nahawand, D'Erlanger (1949:208) and Mahfuz (1964:306) write that this mode uses GG AAb and BB below the tonic; this provides simple octave duplication as Nahawand has, at least part of the time, G Ab and B in its central octave (at other times it has G Ab and Bb). However, in a transcribed taqāsīm which D'Erlanger provides for maqam Nahawand, there is one occurrence each of BB-b- and B-b-, notes which function as leading tones to the tonic and the octave (C and c), respectively.

In discussions with present-day musicians and theorists, it is clear that these disagreements reflect an aspect of ambiguity and even an element of choice regarding the leading tones in these maqamat. For example, while most first acknowledge simple octave duplication in maqam Nahawand (GG AAb BB C), a few state that Nahawand uses AA and BB as leading tones to the tonic C. One teacher in Cairo stated that all three maqamat, Nahawand, Nawa Athar and Nakriz, can use BB or BB-b-. Another teacher stated that these modes can all use AA and BB, AA# and BB, and AAb and BB, but not BB-b-. Still another teacher felt that there is no room for alternatives. He stated that these three modes can only use GG AAb BB C, that using any other notes would result in a change of mode.

Mention of BB-b- in these modes recalls an earlier understanding of the Hijaz tetrachord, which was sometimes given the intervals 1 2b 3-b- 4 (today it is understood to be 1 2b 3 4). Thus, a Hijaz tetrachord on GG was often given the notes GG AAb BB-b- C. These are the notes indicated for maqam Nahawand by al-Khula'i, writing in 1904 (p.42). The only recent writer to include this interpretation is Kamil (1975:57 and 58) who presents Nahawand and Nawa Athar as using G Ab B-b- c. Kamil does not comment on notes below the tonic in maqam Nahawand but he does give BB-b- as the leading tone for maqam Nawa Athar.

Notes Below the Tonic Indicated by Theorists and Present-Day Musicians:

maqam Nawa Athar:

```
                                      ____________
                                     ¦ jins Hijaz ¦
                   C    D Eb      F# G Ab       B c
                BB
    GG AAb      BB
          AA    BB
            AA# BB
             BB-b-
       AAb   BB-b-
```

maqam Nakriz:

```
                                  ____________
                                 ¦  jins Nah. ¦
               C    D Eb       F# G    A Bb     c
GG   AA BBb
            BB
GG AAb      BB
     AA     BB
        AA# BB
         BB-b-
```

maqam Nahawand:

```
                                  ____________
                                 ¦ jins Hizaj ¦
                                 G Ab      B  c
               C    D Eb    F  <
GG AAb      BB                   G Ab    Bb   c
     AA     BB                   ¦_jins Kurd__¦
            BB
        AA# BB
         BB-b-
   AAb   BB-b-
```

Evidence of the ambiguous nature of notes below the tonic for some maqamat leads to the question, "To what extent are the maqamat defined in the region below the tonic?" Surely, for some modes there is no sense of ambiguity. Rast, Bayyati, and Hijaz, for example, all use GG AA BB-b- C. The definition of these modes in the realm of practice clearly includes an understanding of the notes below the tonic (even though theorists commonly avoid mention of these notes). The same can not be said for all modes. For the maqamat Nahawand, Nawa Athar, and Nakriz, there is significant ambiguity. The Cairo teacher who gave three alternative approaches to the notes below the tonic for these modes shed light on the issue when he concluded, "Actually, these notes are not asāsī," i.e., they are not fundamental or basic to these maqamat. (This recalls D'Erlanger's comments--quoted in Chapter X.C above--that notes outside of the fundamental octave are not "essential" and are only "supplementary".)

Further evidence of ambiguity is provided by the following: During an interview with an acknowledged master of Arab music performance, he realized that I had read many of the works on modern Arab music theory and proceeded to ask me, "So what do you think? Which variety of AA is used in maqam Hijaz Kar?" (Hijaz Kar--C Db E F G Ab B c--is commonly understood to use a BB leading tone.) Obviously, then, this individual's knowledge of maqam Hijaz Kar did not provide him with a clear understanding of the type of AA the maqam uses. This suggests that maqam Hijaz Kar is not defined below its BB leading tone.

The D-based maqam Saba offers another example of a mode which, for some, lacks definition in its lower range. Those interviewed all acknowledge Saba to include the notes BB-b- and C; however, this sense of agreement does not extend to the notes below the BB-b-. Many state that Saba uses GG AA BB-b- C (a Rast tetrachord on GG). One informant, however, stated, "There is no tetrachord below the tonic in maqam Saba, only two or three notes" (personal communication, Cairo 6/87). For some, then, Saba does not exist below BB-b-. [9]

Terms for Notes Below the Tonic, Including Leading Tones

Most modern-period writers do not explicitly discuss the concept of "leading tone" or notes below the tonic and thus use no specific term for referring to these phenomena. When middle-period and present-day writers want to indicate that a given mode uses one or more notes below the tonic, they commonly name the notes in question using the system of Arabic/Persian note names. Such statements are usually set in one of two or three cliche phrases which use the verbs lamasa or dā'aba, (to touch and to play, respectively) and the nouns istiqrār or rukūz (both of which refer to the cadence on the tonic). For example, "Before the istiqrār on the note Rast [C], it touches [yalmis, from the verb lamasa] the note ... Kawasht [BB]" (D'Erlanger 1933:259). Or, "Touching (lams) the note Zirkulah [C#] is imperative before the cadence [rukūz] on [the tonic] Dukah [D]" (Kamil 1975:66). Or, "Zirkulah [C#] is played [tadā'ab, from the verb dā'aba] before the istiqrār" (Qasas n.d.:207). [10]

Ḥassās

Towards the middle of the twentieth century, Arab theorists began to use the Western concept of leading tone in their writings. An Arabic term for the concept was arrived at by translating the French term for leading tone, *sensible*. The new term, *ḥassās* (literary, "sensitive, sensible"), appears in our sources in al-Hifni c.1946:290 and Salah al-Din 1950:31,107, etc. al-Hilu (1972:95 n.3) defines *ḥassās* as "the seventh note of the scale of a maqam, any maqam, between it and the eighth [note] is a half step ..." Modes are labeled as being "with *ḥassās*" (*bi ḥassās*) if they have a half-step leading tone (maqam Nahawand with B natural, for example, or maqam Nawa Athar), and as being "without *ḥassās*" (*bi dūn ḥassās*) if they have a minor seventh (Nahawand with Bb, for example, or maqam Nakriz). The term has been incorporated within comments indicating the need for the half-step leading tone at the cadence. For example, Muhammad states that maqam Busalik requires "the *ḥassās* at the time of the *istiqrār*" (1984:39); similarly, al-Hilu writes for maqam Farahfaza that "it is obligatory to touch the *ḥassās* before the *istiqrār*" (1972:95). A number of musicians also know and use the French *sensible*.

Salah al-Din (1950) and later writers also use *ḥassās*, on occasion, to refer to internal leading tones. For example, maqam Hijaz Kar (C Db *E F* G Ab *B c*) is said to have two leading tones, i.e., E and B (Salah al-Din 1950:179); similarly, the F# in maqam Mustaʿar (E-b- F# G ...) is said to function as a leading tone to G (Qasis n.d.:209).

The term *ḥassās* is also used in a special construction to refer to an accidental that occurs within Hijaz tetrachords or Nawa Athar/Nakriz pentachords. In Hijaz tetrachords (1 2b 3 4), this accidental occurs when a 2# is introduced as a lower neighboring tone to the major third (3 2# 3). This is described in present-day Cairo as *ḥassās al-ḥassās*, i.e., "a leading tone of the leading tone," since the 2# acts as a leading tone to 3 which itself acts as a leading tone to 4. In Nawa Athar/Nakriz pentachords (1 2 3b 4# 5), the *ḥassās al-ḥassās* is a sharp third which functions as a lower neighboring tone to the sharp fourth (4# 3# 4#). (Accidentals are discussed further in Chapter X, Section H.)

Ẓahīr

Another term which is used to refer to notes below the tonic is *ẓahīr* (literally "helper, assistant, supporter").

Among the Arabic sources for the present study, the term occurs only in D'Erlanger's 1932 Congress report (for which the Syrian, 'Ali Darwish, was one of the main informants) and in works by the Syrian, Mahfuz, and the Lebanese, al-Hilu. It is not mentioned in any work by an Egyptian author. This suggests that *ẓahīr* has existed as a musical term in Syria and Lebanon but not in Egypt. (The term is not known in present-day Cairo.) *Ẓahīr* is also mentioned by the Western writers, al-Faruqi, Powers, and Pacholćzỳk. In these various sources, *ẓahīr* is used with four different meanings.

First, D'Erlanger and Mahfuz use *ẓahīr* to refer to a tetrachord or near tetrachord below the tonic. D'Erlanger writes,

> The tonic of an Arab mode is often preceded by a note below it which recalls the leading tone [*sensible*] of the European scales, with this difference that it is not inevitably a semitone from the tonic. To this complimentary note another, or even two, is sometimes added below it. These supplementary degrees are likely in this case to form a homogenous group, a tetrachord for which the tonic of the mode would be the upper limit. This tetrachord then takes the name *dhahīr* [*ẓahīr*] or *genre auxiliaire*. (1949:107)

While D'Erlanger does not consider the *ẓahīr* to be an inherent or constant feature of every mode, Mahfuz uses the term to refer to from two to five notes below the tonic in each of the twenty-two modes he discusses. For the BBb-based maqam `Ajam `Ushayran, for example, the *ẓahīr* consists of GG, AA, and the tonic BBb (1963:273). (Mahfuz does not discuss any GG- or AA-based modes.) Most often, the *ẓahīr* is conceptualized as an additional tetrachord below the tonic. For example, the *ẓahīr* of maqam Rast is a Rast tetrachord on GG, i.e., GG AA BB-b- C (1964:320).

Second, al-Hilu (1972:95 n.2) and Powers define *ẓahīr* as referring to a single note, the seventh degree of the scale, rather than to a tetrachord. Powers, for example, presents *ẓahīr* as a modern-day term for "subfinal" (1980: v.12:427). Pacholczyk offers a third understanding of *ẓahīr*: "The term *ẓahīr* is applied both to the note a step below the *qarār* [the tonic], functioning like a leading tone to the tonic, and to a cadential phrase leading from a lower pitch up to the *qarār*" (1980 v.1:522).

Although D'Erlanger defines *ẓahīr* as referring to an auxilary tetrachord below the tonic (see above), he himself uses the term in his 1933 Arabic-language report with a fourth and entirely different meaning. Here, *ẓahīr* refers to a note or notes which precede and thus "support" the first note to be played in the performance of a given mode (*ẓahīr* literally means "supporter"). For example, D'Erlanger writes for the GG-based mode Shadd 'Araban that "it is necessary that the entry into [the maqam] is from the note [G] but it is possible to use [F#] as *ẓahīr* to [G]" (1933:185). And for the C-based maqam Nahawand: "The beginning is from the first tetrachord entering into it from the note [G] with a touch of [F] or [C] as *ẓahīr* to [the G]" (ibid.:249). This use of the term is found in the works of al-Hilu (1972:99,102, and 105) and Mahfuz (1964:337), both of whom often copy passages from D'Erlanger, and in Qasis (n.d.:196). [11]

It must be emphasized that a majority of the sources for the present study do not use the term *ẓahīr* at all, no matter what definition one has in mind. The term is not used, for example, in the work of the Syrian al-Sabbagh, or the Syrian-born but Cairo-based al-Shawwa. In a series of interviews conducted in Cairo in 1987, I found that the word *ẓahīr* does not presently exist there as a term with musical associations. Musicians and music theorists know the word only in the context of the game of soccer (football or *kūrah*), where the *ẓahir* is one of the players, a defense back, on a soccer team. One informant, a performance and theory teacher, commented when shown the term in Powers' New Grove article, "That is an ingenious use of the word. He took the term from the game of soccer."

The Intervallic Nature of Leading Tones and Directional Notes in Arab Music

In some maqamat, the leading tone occurs a half-step below the tonic and thus fits the traditional Western understanding of the leading tone concept. For example, many conceptualize maqam Nahawand as changing from a minor to a major seventh in movement to the tonic (its scale is C D Eb F G Ab, Bb and B, c). Sikah and Huzam are also understood by many to use the note D in movement which descends from the tonic, E-b-, but to use D=/= in cadences on the tonic (the interval D=/= to E-b- is a half step). In a number of prominent modes, however, the leading-tone function is performed by a three-quarter-step interval, most commonly resulting when the note Bb is changed to B-b- in C-based modes. In maqam Rast, for example, the notes BB-b- and B-b- serve to lead the melodic movement to the tonic and the octave, respectively, while the Bb tends to keep the melodic focus within the central octave:

maqam Rast:

```
                              <<<<<< ^
BB-b-   C    D   E-b-   F    G   A (Bb) (B-b-)  c
 ^ >>>>>                                  ^ >>>>
```

The same BB-b-/B-b-/Bb complex in D-based modes results in a half-flat sixth functioning as a "leading tone" or directional note [12]. In the maqamat Bayyati, Hijaz, and Saba, for example, the notes BB-b- and B-b- lead the melodic movement upwards towards the tonic and the octave, respectively, while the Bb tends to keep the focus within the central octave. In either case, the seventh in these modes remains a minor seventh (i.e., C or c) and thus functions neutrally in this regard:

<u>maqam Bayyati:</u>

```
                              <<<<<< ^
BB-b-   C    D   E-b-   F    G    A (Bb) (B-b-)  c    d
 ^ >>>>>>>>>>                             ^ >>>>>>>>>
```

<u>maqam Hijaz:</u>

```
                              <<<<<< ^
BB-b-   C    D Eb          F# G    A (Bb) (B-b-)  c    d
 ^ >>>>>>>>>>                             ^ >>>>>>>>>
```

<u>maqam Saba</u>: (Saba on D uses Bb and db; however, these notes change to B-b- and d, respectively, when one wants to state Saba on d):

```
                         <<<<<<<<<< ^
BB-b-   C    D   E-b-   F Gb      A Bb          c db
                                          B-b-   c    d
 ^ >>>>>>>>>>                              ^ >>>>>>>>>
```

Many believe that maqam Nahawand includes a shift from a flat sixth (AAb/Ab) to a natural sixth (AA/A) in movement to the tonic or the octave. This provides an example of a natural sixth acting as a "leading tone" or a directional note. When this is coupled with a change from a minor seventh (Bb) to a major seventh (B), then we have an example of a double "leading tone."

```
                           <<<<<<<<<<<< ^
 AAb      BB  C    D Eb    F    G Ab   (Bb) (B) c
    (AA)  ^>>>                     (A)      ^>>>
     ^ >>>>>>>                      ^ >>>>>>>>>>
```

"Leading tones" or directional notes in Arab music can thus be the major or half-flat seventh, the half-flat sixth, or the major sixth and seventh together (in the case of Nahawand).

From these examples, it is clear that the interval between the tonic and the sub-tonic can be a whole step (C to D in many D-based modes), a half step (B to C in a number of C-based modes, D=/= to E-b- in a many modes based on E-b-), or a three-quarter step (as with Rast's BB-b- to C). Of these three sizes of intervals, only the half-step variety of sub-tonic is commonly named in present-day Arab music theory (by the term <u>hassās</u>).

In summary, notes below the tonic are explicitly indicated for many modes in early- and middle-period theory. For many other modes the lack of any mention of these notes suggests that they were either not used or were considered optional. In contrast, present-day theory ignores notes below the tonic for all but a few modes. By doing so, it fails to document a complex state of affairs in the realm of performance; for example, non-duplication below the tonic and differences of opinion concerning the notes in this lower range are both rather common.

Comments indicating when notes below the tonic occur in the performance of a mode suggest that the role and function of these notes has changed over the course of the modern period. It seems that they are now used more freely and more often than they were in the past.

Finally, the lack of systematic attention to notes below the tonic is reflected by an absence of any widely accepted Arabic terminology for the various types of leading tones or directional tones that occur in Arab music (with the exception of the term hassās which refers to half-step leading tones).

NOTES FOR CHAPTER X, SECTION G

1. Only Mahfuz's work (1963 and 1964) stands as an exception to this general approach to scale in the middle period. For each mode he discusses, Mahfuz identifies two or more notes below the tonic. He does not, however, discuss any GG- or AA-based modes and thus does not address the issue of whether these modes also use notes below the tonic. If they were to use such modes, then notes below GG, the lowest note of the standard two-octave gamut, would be required.

2. In his presentations of the scales for each maqam, al-Shawwa includes a note below the tonic for only *one mode*. Maqam Busalik, a D-based mode, is presented as having a scale which descends to the note C# (ibid.:70). Similarly, the report of the Institute of Oriental Music includes a note below the tonic for only one of the fifty-two scales it offers. The scale of the C-based mode, Shurak, descends to BBb (Recueil 1934:548).

3. The use of notes below the tonic is implied for another fifteen modes. These are compound modes such as Bayyati Busalik, Husayni Busalik, and Muhayyar Busalik, which are said to end with maqam Busalik (1949:298ff.). Maqam Busalik is described as requiring a C# leading tone before the final cadence on the tonic D. Therefore, we might assume that this note appears in all these compound modes.

4. The tendency to associate notes below the tonic almost exclusively with the final cadence first appears, in our sources, in al-Khula'i's 1904 work. For each mode, al-Khula'i first gives a scale which ascends from the tonic and then comments, for many modes, that at the time of the descent, the mode in question uses such-and-such notes below the tonic. For example, for the C-based maqam, Suznak, he writes, "[C, D, E-b-, F, G, etc.] ... And at the time of the approach of the descent it uses the notes [BB-b-, AA, and GG] and the settling at the end is on the note [C]" (p.41). It seems, however, that al-Khula'i is himself quoting from an earlier source in these passages. This is suggested by his use of the terms pardah for "note" and aradī to indicate the lower octave. Elsewhere, al-Khula'i uses naghamah for "note" and qarār to indicate the lower octave.

al-Hilu ([1961] 1972), basing much of his presentations of the individual modes on D'Erlanger's Arabic-language report in the 1932 Congress publication, mentions notes below the tonic for 17 of 32 modes. Thirteen use these notes only within the final cadence on the tonic, while four use these notes at the beginning of the performance.

al-Shawwa's presentation of notes below the tonic in twenty-two of 108 modes shows less of a preference for their occurring only at the final cadence (1946). Eleven of the twenty-two modes use these notes only at the end of a performance while eight use them at the beginning (two of these also use them at the end). The three remaining modes, Farahnak, Nahwand Sinbulah, and Zirkulah, use the notes below the tonic only after one or more initial phrases.

5. See, however, D'Erlanger's statement on a mode's essential range within his discussion of modal ambitus (quoted in Chapter X.C). In this passage, D'Erlanger says that notes below the tonic "do not constitute an essential part of the modal scale, [although] the mode at times owes to them a little of its distinctive character" (1949:100).

6. In his discussion of the concept of dominant, D'Erlanger comments on what he perceives to be a repercussion of instances when the dominant is not the fifth: When the dominant is the fourth or third, then

> the modal scale is not considered as starting from its first note, its tonic, but from one or two degrees below [the tonic]. Thus the dominant of a mode on mi is sol and is only a third from its tonic. If we have the scale of this mode start from do, its dominant finds itself a fifth from this note. Moreover, it is rare that the composer who employs this mode does not touch the do before affecting the final repose on the mi, the real tonic, the first note of its theoretical scale. (1949:106)

This is an ingenious observation, one that is not found in any of the Arabic-language works surveyed for the present study. While it works well for explaining the prevalence of the note C in D-based modes and the use of C and D in modes based on E-b-, it does not explain the frequent use of leading tones in C-based modes which have G as their dominant (ghammāz). Note, for example, the widespread use of the BB leading tone in maqam Nahawand (BB/C D Eb F G ...).

7. al-Khula'i indicates that this was the common understanding in his time; i.e., he says Bayyati uses GG AA BB-b- C (1904:43). This shows that the present-day understanding of the mode has existed throughout the twentieth century. Mashaqah's melodic phrases for the modes Dukah (sometimes called Bayyati), Bayyati 'Ajami, Bayyati Nawa, Bayyati Husayni, Shuri Bayyati, and Dhuri Bayyati all do not descend below the notes D or C; thus, we do not know which type of BB was used in these modes in the early nineteenth century.

8. From comments in al-Khula'i's 1904 work, it is clear that this understanding of the notes below the tonic has existed throughout the twentieth century: al-Khula'i states that maqam Suznak uses GG AA and BB-b- (p.41), while maqam Shuri is equated with maqam Bayyati which is given the notes GG AA BB-b- C (p.43).

The fact that Suznak and Shuri do not duplicate their notes in the lower octave but rather use the notes of the modes Rast and Bayyati is significant support for the fasīlah system of classification which considers Suznak and Shuri as subsidiary manifestations of Rast and Bayyati, respectively.

Rast: /C D E-b- F G A B-b- c
GG AA BB-b-/

Suznak: /C D E-b- F G Ab B c
GG AA BB-b-/

Bayyati: /D E-b- F G A Bb c d
GG AA BB-b- C /

Shuri: /D E-b- F G Ab B c d
GG AA BB-b- C /

It must be emphasized that one can use Hijaz on GG in a composition or improvisation in maqam Suznak or maqam Shuri. However, most musicians agree that it is not a primary feature of these modes. For example, a taqāsīm in either of these modes which begins by presenting the tonic region would use some or all of the notes of a Rast tetrachord on GG rather than the notes of a Hijaz tetrachord on GG. Only when ascending to the Hijaz tetrachord on G will improvisers commonly descend the octave and repeat the Hijaz tetrachord in the lower octave, as a form of octave mirroring. Perhaps, in recognition of this practice, Mahfuz admits both a Rast and a Hijaz tetrachord on GG for maqam Suznak (1964:317). However, he gives only a Rast tetrachord on GG for maqam Shuri (ibid.:355).

9. The GG in maqam Saba is somewhat surprising considering that Saba's most significant feature is its use of Gb instead of G. Only two of the written sources for the present study mention notes below the tonic in maqam Saba: Mahfuz indicates the notes GG AA BB-b- and C (1964:351). al-Khula'i comments that "sometimes the note [C] changes to [C#] in descent" (1904:41). One Cairo informant stated that the phrase C# Eb D is occasionally used to give "color" to a cadence on the tonic. That Saba is understood to use the same notes below the tonic as maqam Bayyati (i.e., GG AA BB-b- C) is substantial support for those who consider Saba to be one of the modes in the Bayyati fasīlah (see Chapter IX above).

10. The term qarārāt is used to refer to the notes in the lower part of a modal scale. See Rawdat al-Balabil (1921:161) where qarārāt is used to refer to the notes GG, AA, BB-b-, and C in maqam Rast. However, this term is generally not used in discussions of a mode's characteristic melodic features, such as the touching of a specific note below the tonic during the final cadence.

11. Qasis is the only writer among our sources to explicitly recognize this use of the term. He defines ẓahīr as the note which is played before the note of entry into a maqam (n.d.:211). (See discussion of "starting notes" in Chapter X.I, below)

In his presentation of the maqamat, al-Hilu uses ẓahīr to mean the note below the tonic on only one occasion: C is called the ẓahīr of maqam Bayyati (1972:118). In all other instances, he uses it as D'Erlanger used it in his 1933 report. Mahfuz is the only writer from the sources for the present study to actually use the term ẓahīr to mean a tetrachord below the tonic. (D'Erlanger mentions this definition but does not use the term with this meaning.)

12. As the concept of leading tone has, traditionally, been reserved for describing the seventh degree of a scale, Racy has used the phrase "leading-tone-once-removed" to describe the function of the sixth degree in these and other modes. Powers suggest "directional note" for referring to such pitches (personal communication 12/28/87).

H. ACCIDENTALS / ADDITIONAL NOTES

Accidentals play a major role in Arab music performance. This section focuses on these "extra" notes and is divided into two main parts. The first part is a survey of the sources for the present study to determine the extent to which the phenomenon of accidentals is recognized, the kinds of accidentals that are discussed, and the role that these "additional notes" are said to play in the definition of the individual maqamat. This survey begins by focusing on references to two specific types of accidentals, i.e., those which are used in discontinuous motion (this is explained below) and those used in chromatic movements. It then reviews other ways that the concept of "accidentals" has been used in Arab music theory. The second part of this section analyzes the various kinds of single-note accidentals found in common practice. This discussion represents the first time that these accidentals are isolated and classified.

In this section, we define an accidental as a temporary altering of one of a mode's primary notes. As the performance of the Arab modes often includes tetrachordal changes and changes in directional notes, we must restrict this definition by saying that we are not concerned here with temporary alterations that are best viewed as tetrachordal changes or the introduction of leading tones/directional tones (these are discussed separately in Sections D and G, above). The altered notes we will consider are mostly those used in discontinuous movement, discontinuous in that they are usually approached from and followed by the same note (see Jairazbhoy 1971). These notes are often called lower or upper neighboring tones. In maqam Nahawand, for example, which has the notes C D Eb F G..., E natural is a discontinuous accidental in the following phrase: C D Eb <u>F E F</u> Eb D C. If the E were to occur in continuous movement to or away from the note F it might best be interpreted as part of a change in tetrachord as in the following examples, again using maqam Nahawand: C D Eb F <u>G F E D C</u> D Eb F G and G F Eb D <u>C D E F G</u> F Eb D C. Here the E naturals are best interpreted, not as accidentals, but as part of temporary changes to an `Ajam tetrachord on C.

We will, however, allow one exception to this general rule regarding continuous and discontinuous motion: we will consider a note as an accidental when it occurs within chromatic passages, i.e., within phrases which contain three successive half-step intervals. This is because the resulting group of notes cannot be interpreted as a change to another recognized tetrachordal structure. As an example we offer the following phrase, also in maqam Nahawand: c Bb Ab G, G F Eb D, <u>D Eb E F</u>, Eb G F Eb D C, BB C.

A.1. The Concept of Accidentals (Discontinuous and Chromatic) in the Literature and Among Present-Day Musicians and Music Educators

From comments in Mashaqah (c.1840) and an analysis of present-day practice it is clear that discontinous accidentals have played an important part in Arab music performance throughout the modern period. Despite this, only three writers from among the sources for the present study have included explicit mention of such accidentals; even these three writers do not treat the subject systematically. Thus, it can be said that, with the exception of a few isolated comments, the theoretical literature does not incorporate the concept of accidentals into the definitions of the individual maqamat.

The first of the three sources is Villoteau who indicates "notes accidentelles" in four of the seventeen modal scales that he notates (1826:127:130). Unfortunately, Villoteau provides no explanation for these notes. Further, his use of thirds-of-a-tone rather quarter-tone intervals in these scales makes his examples difficult to understand from a modern-day perspective.

Far more significant references to accidentals occur in Mashaqah's work. In his descriptions of a number of modes, Mashaqah informs us these notes were, in fact, used in the performance practice during his time and that, in at least some cases, they were considered to be essential and characteristic features of the modes in which they occurred.

Mashaqah's clearest statement of the use of an accidental is found within his comments on maqam Husayni. Initially he describes the mode as follows: "Husayni, it is A, F, G, A distinctly, then c B-b-, both obscurely, then G distinctly with F#, then G, then A, then c, B-b-, then descend step by step [using the fundamental-scale degrees] to D" ([c.1840] 1899:886; the notes are indicated in this passage by their Arabic-Persian names). He then adds:

> Note that the F# is not used always in this mode [lahn] but it is used occasionally when the singer is descending to it from the notes which are above it intending to return from it to [what is] above it. As for he who is intending to descend to what is below it, [regardless of] whether he intends to proceed to the tonic [qarār] and the end of the phrase [ḥarakah] or intends to return to what is higher than it before proceeding to the tonic, at that time it is necessary that he descend from the note G to F, then to what is below that, and not turn to the note F#. And it is like that at the time of ascent from the lower to the higher [notes], [i.e.,] one passes with F and does not turn to [F#] as already mentioned. (ibid.)

While this and similar passages (see, for example, his comments on maqam Awj; ibid.:931) alert us to the existence of accidentals in the performance practice of the early part of the modern period, it is also apparent that Mashaqah has no term for referring to what we are calling accidentals and does not conceptualize a special category of such notes.

The only other writer to explicitly mention accidentals is Salah al-Din. He does not mention them in his descriptions of the individual maqamat; rather on a single page in his 1960 work, within a section entitled "The Practical/Applied Section" (al-Qism al-ʿAmalī) (1960:145ff.), Salah al-Din includes an analysis of a vocal piece which contains accidentals. Here, confronted with their occurrence in practice, Salah al-Din comments, for example, that an f# which appears as a discontinuous lower neighboring tone to g within maqam Nahawand (g f eb ab g f# g) is "an accidental change" (*taghyīr ʿāriḍ*) (ibid.:170; see below for a discussion of the word *ʿāriḍ*/*ʿaraḍiyyah*).

During fieldwork conducted in Cairo I was able to study how present-day theorists, music educators, and musicians deal with the topic of accidentals. As is the case with the writers of the theoretical literature, these individuals, with but one or two exceptions, do not conceptualize the maqamat as having characteristic accidentals. Thus, they do not mention these notes in their discussions of the individual modes. When discussions turn to the analysis of pieces in which these notes occur, they will analyze the relevant passages in one of three ways. First, whenever possible, an accidental will be analyzed as a temporary modulation to a new maqam (this is possible in the case of precadential accidentals; see below). Second, when possible, accidentals will be analyzed as temporary leading tones (using the terms *ḥassās*, the French *sensible*, or, in some instances, the term *ḥassās al-ḥassās*; see Chapter X, Section

G for a discussion of these terms). Third and most commonly, accidentals will be acknowledged as "ornaments" (*ḥilyāt*, s. *ḥilyah*); as "ornamentation" (*zakhrafah*), as a "coloring" (*talwīn*), or as "one of the maqam's [possible] moves/movements" (*ḥarakah min ḥarakāt al-maqām*). The words or phrases, *ḥilyah*, *zakhrafah*, *talwīn*, and *min ḥarakāt al-maqām* are all used as a way of dismissing these moments as unworthy of further discussion, as not affecting one's analysis of the larger passage in which they occur.

Among my informants for the present study, only two individuals explicitly recognized accidentals as characteristic features of the maqamat in which they occur. First, Mansi Amin, a private lessons teacher in Cairo, uses the word *ramal* as a term for naming "any extra note used in the path of a maqam" (personal communication, 6/20/87). This is an idiosyncratic usage not known to anyone else I spoke with in Cairo. As Ramal is elsewhere understood to be a maqam which occurs when Gb is temporarily introduced into maqam Sikah (Sikah normally uses G natural: E-b- F G A...), it seems likely that the name Ramal became associated for Amin with the introduction of a new note into maqam Sikah and then, at some point, became a term for referring to all temporarily added notes. By using such a term, Amin stands as the only individual among my Cairo informants to explicitly recognize a separate category of notes which function as characteristic accidentals for the various maqamat.

The other individual to mention accidentals was A. Jihad Racy. Trained in the field of ethnomusicology, Racy, a professor at UCLA, teaches that most of the maqamat have characteristic accidentals which appear in performance. Using the term "accidentals," Racy includes such notes as essential elements in his definitions of the individual maqamat. (The specific accidentals which are used in each maqam are discussed below.) Since these notes are not recognized as a part of the definition of the maqamat by most in the Middle East, we can probably assume that Racy's contact with Western music and Western scholarship has played an important role in his conceptualizing these notes as an important feature of the individual maqamat.

The matter of chromatic movement in Arab music represents a separate issue. This unique use of accidentals is not systemistically discussed or recognized by any of the sources for the present study as a characteristic feature of any maqam. The phenomenon is, however, mentioned by two writers (without great clarity in either case). Mashaqah comments negatively within his description of the mode Musta'ar that it is not possible to follow B-b- with Bb and then to have the two followed by A "because the immediate succession of three unequal tones [naqrāt; literally "plucks" of a string] in the interval between two fundamental notes is never correct" ([1840] 1899:928; 1913:100). While rejecting unequal divisions of the intervals between fundamental notes (B-b- to Bb is a one-quarter-step interval, while Bb to A is a two-quarter-step interval), this passage seems to admit that a whole tone can be divided by two half-step intervals. In his descriptions of ninety-five modes Mashaqah does include one example of such a movement: a rare mode called Hastiq or Hasinak is given the following line, "It is A Ab [or G#], then G obscurely, then F, then E-b- D" (1899:886; 1913:95).

Writing over 120 years later, Salah al-Din is the only other of our sources to mention chromatic movement. He does so on a number of occasions: The clearest comment is within the analysis of a vocal piece (1960:170). Here the phrase *f e eb d* within maqam Nahawand is called "a chromatic passage which rests on d" (*harakah krūmātīkiyyah*...). Elsewhere (1950:110 and 115; 1964:22), Salah al-Din indicates notes in specific maqamat which move "chromatically" (e.g., F moves to F#) but his intent in these cases does not seem to be that the two versions of the same note are heard along with a neighboring note in a chromatic passage. In most cases the two versions of the same note are alternatives, played, it seems, in different phrases. Despite the fact that chromatic movement has not been discussed in a systematic fashion we will see in a following section that chromatic passages can be viewed as a characteristic feature of the maqamat in which they occur.

A.2. Other Uses of the Concept of Accidentals in the Literature

In the present section we are using a special restricted sense of the concept of accidentals. While we find only limited recognition of this concept in the sources for the present study, the idea of accidentals occurs with a different meaning in a number of the same sources. It is, perhaps, appropriate here to review these other uses of the concept of accidentals in the modern Arabic theoretical literature. D'Erlanger (1933) is the first writer among our sources to introduce the idea of accidentals into modern-period descriptions of the individual modes. He uses the concept to refer to the temporary occurrence of a particular tetrachord (in three instances: pp. 203, 318, and 320) or to the temporary resting on a specific note (in one instance: p.217). When describing these moments, D'Erlanger refers to each with the phrase *bi-ṣifah ʿaraḍiyyah*, i.e., they should each be treated "as an accidental" or "as a nonessential element." *ʿAraḍiyyah* (accidental, nonessential element) is undoubtably a direct translation of the Western word, "accidental." A number of subsequent writers have used this word (or the variants *ʿaraḍ*, *ʿaraḍī*, and *ʿāriḍ*) in their theories but, following D'Erlanger's lead, have not used it to refer to our categories of temporary discontinuous tones and chromaticisms. While D'Erlanger can be seen as the one who introduced the word into the Arabic musical vocabulary, it must be emphasized that D'Erlanger uses it in his presentations of only four of ninety-five modes. Further, he does not explicitly recognize a separate category of melodic phenomena called *ʿaraḍiyyāt* (the plural noun); rather, he seems to use *ʿaraḍiyyah* only for its descriptive content. [1] While these qualifications stand, D'Erlanger and subsequent writers who use variants of the word *ʿaraḍiyyah* have introduced a significant new idea into modern Arabic music theory. By mentioning *ʿaraḍiyyāt* in their definitions of the individual modes they are recognizing that maqamat contain melodic phenomena which are temporary, nonessential, but also characteristic of the mode in which they occur.

Among the subsequent writers who use the word *ʿaraḍiyyah* three stand out, Salah al-Din for the variety of ways he applies the word, and al-Hilu and Fatah Allah et al. for establishing the word in their work as a specific term. Salah al-Din, a student of Western music and a teacher of Arab music theory at one of the main music institutes in Cairo [2], fully accepted the idea that a maqam can have accidental features. In his 1950 work Salah al-Din uses *ʿaraḍiyyah* in at least three contexts; however, the word is not used systematically nor are the various usages formally discussed. First, melodic phrases which occur in one maqam but which are perceived as being borrowed from another maqam are called "accidental melodic phrases" (*ʿibārāt laḥniyyah ʿaraḍiyyah*)(ibid.:109). Second, the occurrence of tetrachords other than those which define a maqam's principal structure are called either "an accidental/nonessential form" (*shakl `ārid*)(ibid.:117) or "an accidental/nonessential change" (*taghyīr `āriḍ*) (ibid.:191). And third, a temporary occurrence of a half-step leading tone in a mode which generally does not have this note is called a "a passing accidental" (*murūr `āriḍ*) (ibid.:160). *Murūr `āriḍ* is undoubtably a direct translation of the Western concept. [3] See also al-Sabbagh who uses the phrase *bi-ṣifah `araḍiyyah* when discussing maqamat that temporarily enter into the performance of another mode (1950:52 and 53; see also p.54 and 173).

It is in al-Hilu's work (1st ed. 1961; 2nd ed. 1972) that the concept of *`araḍiyyāt* is finally presented as a formal concept. al-Hilu uses the term to refer to non-essential tetrachords which occur in the performance of a mode. After indicating one such tetrachord al-Hilu writes (1972,104), "This and other tetrachords like it are among the tetrachords which are called *`araḍiyyāt*." He then adds that *`araḍiyyāt* are not prescribed or fixed and can be omitted in a performance of the maqam in question. al-Hilu applies the term systematically: for a majority of the maqamat he describes he first lists the fundamental/essential tetrachords (*`uqūd asāsiyyah*) and then indicates any existing *`araḍiyyāt*. He does not use the term to refer to the kinds of single-note accidentals we are concerned with here nor does he mention these in his descriptions of the maqamat.

Fatah Allah et al. also recognize a specific category of phenomenon called accidentals. They have adapted the concept to refer to the note changes which are presented in other works as ascending/descending scalar variants. Stating that the notes of a maqam are either asāsī (fundamental) or ʿaraḏī (1979:29), they analyze the B-b- in maqam Rast as one of the mode's fundamental notes while Bb in the same mode is said to be an accidental (ibid.:33 n.1). [4]

The concept of accidentals is also used in the realm of staff transcription. Here, accidental signs which must be added into the transcription in order to properly record the notes in a given piece of music are called "accidental symbols of change" (ʿalāmāt al-tahwīl al-ʿāriḏah) (Salah al-Din 1964:19; Shawqi 1964:34) or "accidental changes" (taghyīrāt ṭāri'ah) (Mashʿal n.d.:64ff.). While the presence of such symbols might indicate an occurrence of a discontinuous accidental or a chromaticism, in many cases such symbols are needed in order to properly record one or more of a given mode's fundamental notes. This is the case because it is common to adhere to the rules of Western key signatures when transcribing Arab music. For many modes this means that the key signature does not accurately reflect the sharps, flats, half-sharps, or half-flats contained in the mode's fundamental scale. For example, maqam Nawa Athar which has Eb and Ab (and F#) but B natural (C D Eb F# G Ab B

c) is often transcribed using a key signature of three flats (Bb, Eb, and Ab) simply because, according to the rules of Western key signatures, you cannot have Eb and Ab in the key signature without first writing in a Bb. The scribe is then required to add natural signs in front of every occurrence of the note B natural. For a similar reason it is common to exclude from the key signature the F# needed for this same mode and to introduce accidental signs throughout the transcription at every occurrence of the note F#. [5]

B. The Accidentals Used in Arab Music

Since single-note accidentals are not generally recognized as characteristic features of the maqamat in which they occur and are commonly dismissed as nonessential elements, there has been no attempt to isolate, classify, or explain the various accidentals that are found in practice. [6] The following pages attempt these very tasks with the help of the discussion on accidentals/additional notes found in Nazir Jairazbhoy's book, The Rags of North Indian Music.

Types of Accidentals: A Classification

On the broadest level there are three types of single-note accidentals in Arab music: discontinuous lower neighboring tones (these will be referred to as dlnt-s), discontinuous upper neighboring tones (dunt-s), and chromaticisms (chromatisms will be seen as a special usage of dlnt-s). These will be discussed in turn.

1. dlnt-s

Discontinuous lower neighboring tones are accidentals which are approached from and followed by the same note, this note being a half step above the accidental itself, e.g., F E F, G F# G, Bb A Bb, where the underlining note is the dlnt. [7] One can decipher two kinds of dlnt-s in Arab music: one functions as a temporary leading tone to the initial note of a tetrachord and thus occurs immediately below the given tetrachord; the other functions as a temporary leading tone to one of the other notes of the tetrachord and thus occurs within the tetrachord.

1.a. Dlnt-s Which Act as Leading Tones to the Base Note of a Tetrachord

According to modern-day Arab theory, initial notes of tetrachords are either the mode's tonic, octave, or ghammāz(āt). Leading tones to the tonic or octave which are commonly conceptualized as a part of a mode's ascending scale are not discussed here because they are usually understood to be fundamental rather than "accidental" and also because they are usually treated in continuous rather than discontinuous movement. A few modes do, however, have leading tones to the tonic or octave which are treated as discontinuous accidentals. According to many musicians, this is the case with most of the E-b- and BB-b- modes. In the E-b- modes Sikah and Huzam, for example, the D=/= leading tone is often played only when approached from and followed by the tonic E-b- but is replaced by D natural in continuous movement below the tonic: E-b- F G F E-b- D=/= E-b-, E-b- D C, C D E-b- F E-b- D=/= E-b-. [8]

Leading tones to the ghammāz can occur in virtually all modes and as such are not so much characteristic of a specific mode as they are of the tetrachordal tendencies of Arab music as a whole. They are especially common, however, when the mode's second tetrachord (the jins al-far') is Nahawand. This occurs in the maqamat Rast, Bayyati, and Sikah in moments when Bb is used instead of B-b- (see diagram below), and also in maqam Kurd. In the present-day theory the ghammāz is usually the note G (see Chapter X, Section F, above); thus, the leading tone to the ghammāz is most commonly the note F#. The leading tone to the ghammāz can be used to prepare for a modulation to a new mode based on the ghammāz, to maqam Nahawand on G, for example.

the F# leading tone accidental in Rast, Bayyati, and Sikah (these modes use both a Nahawand and a Rast tetrachord on G; the F# accidental occurs most commonly in conjunction with the Nahawand tetrachord on G):

```
                   ____________
                  ¦ Rast on G  ¦
                  G   A  B-b-  c
C   D  E-b-  F <                    d  e-b-
                  G   A Bb     c
¦   ¦   ¦        /¦ Nah. on G  ¦    ¦   ¦
¦   ¦   ¦   .   /              ¦    ¦   ¦
¦   ¦   ¦      F#              ¦    ¦   ¦
¦   ¦   ¦                      ¦    ¦   ¦
¦___¦___¦___maqam Rast_________¦    ¦   ¦
    ¦___¦________maqam Bayyati______¦   ¦
        ¦_____________maqam Sikah_______¦
```

1.b. Dint-s Which Act as Leading Tones Within a Tetrachord

Dint-s within a tetrachord can, in almost all cases, be considered a characteristic feature of both the maqam and the tetrachord in which they occur. See the following four examples: 1) In the first tetrachord of maqam Rast (C D E-b- F G) the E-b- often has D=/= as a dint (see, for example, the second measure of samā`ī Rast by Tatyus). This D=/= can be seen as a borrowing from the E-b- maqamat which use this note as their leading tone. 2) In the first tetrachord of maqam Nahawand (C D Eb F G) the F often has E natural as a dint. 3) This same accidental, E natural, occurs as a dint to F in the first tetrachord of maqam Kurd (D Eb F G) (see, for example, the first verse of "Inta `Umrī," an Umm Kulthum song). And 4) in the second tetrachord of maqam Huzam, a Hijaz tetrachord (E-b- F G / G Ab B c / c d e-b-...), the B can have A# as a dlnt.

As we have mentioned, these dlnt-s are characteristic not only of the maqam in which they occur but also the tetrachord. As such, they can be called upon, with preparation, wherever these tetrachords are found. For example, the Nahawand tetrachord occurs not only as the base tetrachord in maqam Nahawand, but also as the second tetrachord (on G) in the maqamat Hijaz, Kurd, Rast, Bayyati, and Sikah. In these latter modes, the tetrachord's characteristic accidental would appear as a B natural dlnt to the note c (this accidental is more common in Hijaz and Kurd than it is in Rast, Bayyati, and Sikah). Similarly, the Kurd tetrachord occurs on G in maqam Nahawand; its characteristic accidental here appears as A natural functioning as a dlnt to Bb. In the same way, the accidental which occurs in maqam Huzam's Hijaz tetrachord can occur wherever a Hijaz tetrachord is found: when the Hijaz tetrachord is based on D (as in maqam Hijaz) then its dlnt is a E# leading to F# (see `Abd al-Wahhab's "Zaynah"); when the Hijaz tetrachord is based on G (as in the maqamat Suznak, Shuri, Nahawand, Hijaz Kar, and Nawa Athar) then its dlnt is A# leading to B; when based on C (as in maqam Hijaz Kar) then it is D# leading to E; when based on F (as in maqam Saba) then it is G# leading to A. In present-day academic circles in Cairo, the dlnt-s which occur in Hijaz tetrachords are referred to as hassās al-hassās. This is because the accidental functions as a leading tone to the third degree of the tetrachord which is already, in effect, a leading tone to the tetrachord's fourth degree. Many believe that Hijaz's dlnt also occurs in Nawa Athar/Nakriz tetrachords (C D Eb F# G) which can be interpreted as having an "imbedded" Hijaz tetrachord: E# would occur as a dlnt to F#.

2. Chromaticisms

Dlnt-s can be seen as a temporary altering of one of a mode's fundamental notes. In maqam Nahawand, for example, the Eb is temporarily replaced by an E natural (C D Eb F E F G F Eb D C. There are a few occasions, however, when both the original note and its altered version appear in immediate succession. The resulting movement (D Eb E F in maqam Nahawand) is what we are referring to as a chromatic movement. Chromaticisms in Arab music are a characteristic feature of the maqam in which they occur. Such chromaticisms are limited to two tetrachords, Nahawand and Kurd. When a Nahawand tetrachord occurs based on C (as in maqam Nahawand) then the chromatic movement is D Eb E F or F E Eb D; when it occurs based on G (as in the maqamat Hijaz, Kurd, Bayyati, etc.) then the chromatic movement is A Bb B c or c B Bb A. The Kurd tetrachord shares the same chromatic movements:, when it occurs based on D (as in maqam Kurd) then the chromatic movement is D Eb E F or F E Eb D; when it occurs based on G (as in maqam Nahawand) then the chromaticism is G Ab A Bb or Bb A Ab G. Note that modes Nahawand and Kurd can have chromatic movements in both "halves" of their octave scales:

```
maqam Nahawand:  ___________    ____________
                ¦j.Nahawand¦    ¦ jins Kurd ¦
                ¦          ¦    ¦           ¦
                C   D Eb   F    G Ab  Bb    c
                    D Eb E F    G Ab A Bb

maqam Kurd: [9]  __________ ___________
                ¦jins Kurd ¦j.Nahawand¦
                ¦          ¦          ¦
                D Eb    F  G    A Bb  c    d
                D Eb E F        A Bb B c
```

3. *Dunt-s*

The third category of accidentals in Arab music are discontinuous upper neighboring tones (*dunt*-s). *Dunt*-s are generally approached and followed by the same note, this note being a half step below the accidental itself, e.g., F *Gb* F or G *Ab* G (where the Gb and Ab are the *dunt*-s). In a few exceptional cases, *dunt*-s occur within a tetrachord. For example, maqam Rast occasionally includes an Eb acting as a *dunt* to D. Similarly, maqam Nahawand occasionally has a Db which functions as a *dunt* to C (see the *ʿud* solo in the piece, "Dhikrayātī," by al-Qasabji). Most commonly, however, *dunt*-s occur, not within a tetrachord, but rather as an upper leading tone to the highest note of a mode's initial tetrachord or pentachord; the *dunt* is then a flat fifth or a flat sixth. Such dunt-s occur in a number of maqamat, can be considered a characteristic feature of these modes, and serve a special function in performance, i.e., they tend to a signal an upcoming cadence to the tonic. As such, Racy has referred to these notes as "precadential accidentals" (in classes at UCLA). In most cases, the precadential accidental is a flat fifth (as in the maqamat Bayyati, Hijaz, Kurd, Nahawand, Hijaz Kar, and Hijaz Kar Kurd). In maqam Rast, however, the precadential accidental is the flat sixth:

dunt-s which function as precadential accidentals:

Nahawand:	¦Nahawand tetr¦	C D Eb F Gb
Hijaz Kar:	¦ Hijaz tetra ¦	C Db E F Gb
Hijaz Kar Kurd:	¦ Kurd tetra. ¦	C Db Eb F Gb
Hijaz	¦ Hijaz tetra ¦	D Eb F# G Ab
Kurd:	¦ Kurd tetra. ¦	D Eb F G Ab
Bayyati:	¦ Bayyati tetr¦	D E-b- F G Ab
Rast:	¦ Rast pentachord¦	C D E-b- F G Ab

Modern-day theorists commonly analyze phrases with precadential accidentals as temporary modulations to a new maqam, the new maqam being one which shares the same lower tetrachord but has a Hijaz tetrachord as its jins al-far'. This is because they assume that the accidental is the second note of a new Hijaz tetrachord (even when the other notes of this tetrachord do not occur in the phrase in question). In the above examples, the new maqamat are called Nahawand Murassa' or Nahawand Sinbulah, Hijazayn on C, Tarz Nuwin, Hijazayn, Tarz Nuwin on D, Shuri, and Suznak, respectively.

The literature contains only two references to precadential accidentals. In one, Salah al-Din is analyzing a piece of music in maqam Nahawand. When two g flats occur as dunt-s to f in a phrase that proceeds to a cadence on c, Salah al-Din remarks that this phrase can be interpreted either as a modulation to Nahawand Murassa' or as a "one of the cadential patterns of [maqam] Nahawand" (ḥarakah min harakāt qaflāt al-Nahāwand)(1960:170). This last comment is significant as the only instance in the literature where the phenomenon of precadential accidentials is explicitly recognized. Characteristically, this comment does not occur in the section of the work devoted to the formal descriptions of the maqamat but rather occurs within a part of the book entitled "The Practical/Applied Section."

The other reference to precadential accidentals occurs in a work by al-Sabbagh (1950:47). Here al-Sabbagh is describing the rare maqam Hijazayn (D Eb F# G Ab B c d). The name of this mode signifies that the modal scale contains two Hijaz tetrachords (on D and G). As mentioned above, Hijazayn is commonly called upon as a way of explaining the precadential accidental in maqam Hijaz. al-Sabbagh writes, Hijazayn "... is not used except in the performance of the mode Hijaz by touching the [Ab] instead of the [A natural] temporarily." In other words, al-Sabbagh admits here that the second Hijaz tetrachord, Hijaz on G (G Ab B c), is not played except for its first two notes, G and Ab. al-Sabbagh's comment serves to document the use of the Ab accidental in maqam Hijaz. It also points out the inaccuracy of the common interpretation of precadential accidentals as temporary modulations to a new maqam: the new phenomenon is not so much a new maqam as it is a new note (a <u>dunt</u>) added to the mode's lower tetrachord.

<u>maqam Hijaz:</u>

```
 __________  __________
| jins Hijaz |j. Nahawand|
|            |           |
D Eb      F# G   A Bb    c    d
                \
                 Ab
```

<u>maqam Hijazayn:</u>

```
 __________   __________
| jins Hijaz | jins Hijaz|
|            |           |
D Eb      F# G Ab      B c    d
```

The following pages list the characteristic accidentals for each of the nine main tetrachords and for a number of the more common maqamat:

The Characteristic Accidentals Which Occur Within the Nine Main Tetrachords

Rast (C D E-b- F):	D=/= as a *dlnt* to E-b-; Eb (rarely) as a *dunt* to D.
Bayyati (D E-b- F G):	none.
Sikah (E-b- F G):	F# as a *dlnt* to G (since G is the *ghammāz* in most E-b- modes, the F# can be seen as a leading tone to the second tetrachord); D=/= as a *dlnt* to E-b-.
Saba (D E-b- F Gb):	none.
Nahawand (C D Eb F):	E as a *dlnt* to F; E used chromatically (D Eb E F); Db (rarely) as a *dunt* to C.
Kurd (D Eb F G):	E as a *dlnt* to F; E used chromatically (D Eb E F); F# as a *dlnt* to G (since G is the *ghammāz* in maqam Kurd, the F# can be seen as a leading tone to the second tetrachord).
\`Ajam (BBb C D Eb):	the \`Ajam tetrachord has the potential for using BB and C# as *dlnt*-s and Cb and Db as *dunt*-s; however, these occur only rarely and thus cannot be considered as characteristic features.
Hijaz (D Eb F# G):	E# as a *dlnt* to F# (*ḥassās al-ḥassās*).
Nawa Athar/Nakriz (C D Eb F# G):	E# as a *dlnt* to F# (*ḥassās al-ḥassās*).

Characteristic Accidentals Which Occur in a Number of the More Common Maqamat

maqam Rast: C D E-b- F G A Bb/B-b- c

D=/= as a *dlnt* to E-b-;
Ab as a precadential accidental;
F# as a *dlnt* to G (since G is the *ghammāz*, the F# can be seen as a leading tone to the second tetrachord);
Eb (rarely) as a *dunt* to D;
A=/= (rarely) as a *dlnt* to B-b-.

maqam Bayyati: D E-b- F G A Bb/B-b- c d

F# as a *dlnt* to G (since G is the *ghammāz*, the F# can be seen as a leading tone to the second tetrachord);
Ab as a precadential accidental;
B as a *dlnt* to c (w/in Nahawand tetra. on G).

maqam Sikah: E-b- F G A Bb/B-b- c d e-b-

F# as a *dlnt* to G (since G is the *ghammāz*, the F# can be seen as a leading tone to the second tetrachord);
D=/= as a *dlnt* to E-b-.
B (rarely) as a *dlnt* to c (w/in Nahawand tetrachord on G).

maqam Huzam: E-b- F G Ab B c d e-b-

F# as a *dlnt* to G (since G is the *ghammāz*, the F# can be seen as a leading tone to the second tetrachord);
D=/= as a *dlnt* to E-b-;
A# as a *dlnt* to B.

maqam Saba: D E-b- F Gb A Bb c db ...

G# as a *dlnt* to A.
C# (rarely) as a *dlnt* to D.

```
maqam Nahawand:                      G Ab        B c
                 C    D Eb    F  <
                                     G Ab    Bb    c
```

E as a *dlnt* to F;
E used chromatically (D Eb E F);
Db (rarely) as a *dunt* to C
F# as a *dlnt* to G (since G is the *ghammāz*, the F# can be seen as a leading tone to the second tetrachord);
Gb as a precadential accidental;
A as a *dlnt* to Bb (within Kurd tetra. on G);
A used chromatically (A Bb B c);
A# as *dlnt* to B (within Hijaz tetra. on G).

maqam Kurd: D Eb F G A Bb c d

E as a *dlnt* to F;
E used chromatically (D Eb E F);
F# as a *dlnt* to G (since G is the *ghammāz*, the F# can be seen as a leading tone to the second tetrachord);
Ab as a precadential accidental;
B as a *dlnt* to c (w/in Nahawand tetra. on G);
B used chromatically (A Bb B c).

maqam 'Ajam: BBb C D Eb F G A Bb

Maqam 'Ajam has the potential for a large number of accidentals; however, the maqam is rarely played at length and thus the question of characteristic accidentals is not brought to the fore (see further discussion below).

maqam Hijaz: D Eb F# G A Bb/B-b- c d

E# as a *dlnt* to F#;
F# as a *dlnt* to G (since G is the *ghammāz*, the F# can be seen as a leading tone to the second tetrachord);
Ab as a precadential accidental;
B as a *dlnt* to c (w/in Nahawand tetra on G);
B used chromatically (A Bb B c);
C# (rarely) as a *dlnt* to D;
A=/= (rarely) as a *dlnt* to B-b- (w/in Rast tetrachord on G).

maqam Hijaz Kar: C Db E F G Ab B c

E# as a *dlnt* to F#;
Gb as a precadential accidental;
A# as *dlnt* to B (within Hijaz tetra. on G).

maqam Nawa Athar: C D Eb F# G Ab B c

A# as *dlnt* to B (within Hijaz tetra. on G).
E# as *dlnt* to F#.

maqam Nakriz: C D Eb F# G A Bb c

E# as *dlnt* to F#;
B as a *dlnt* to c (w/in Nahawand tetra. on G);
B used chromatically (A Bb B c);

Although one or more accidentals are common in most maqamat, a review of the use of accidentals in the various modes reveals that these additional notes play the largest role in the "Western diatonic" maqamat (i.e., those containing only half-step and whole-step intervals), especially Nahawand and Kurd. Maqam Nahawand, for example, can use all twelve notes of the twelve-tone chromatic scale. Maqam Kurd uses eleven of the twelve. (The twelfth, c# is available but cannot be considered characteristic). These modes are unique not only because of the number of accidentals that are permitted but also because accidentals in these modes have the potential to be self-generating; i.e., multiple accidentals can result from melodic sequencing. Racy, for example, gave the following line in maqam `Ajam transposed to

C in a performance class at UCLA (5/86): c d e d c B c; B c d c B *A#* B; A B c B A *G#* A; G A B A G *F#* G; F G A G F E F; E F G F E *D#* E; D E F E D *C#* D; C D E D C BB C. In this line all seven of the maqam's fundamental notes (C D E F G A B c) are in turn given a *dlnt*. The resulting line contains all twelve notes of the twelve-tone chromatic scale. Similar sequences can occur in maqam Nahawand and maqam Kurd, thus confirming that accidentals are especially prominent in the diatonic modes Nahawand, Kurd, and 'Ajam.

Concluding Remarks

The above survey of the sources for the present study shows that a vast majority of modern-period writers and present-day musicians and theorists have ignored the issues of discontinuous accidentals and chromatic movements in Arab music. When viewed from the perspective offered by the above discussion of the use of these accidentals in modern-day practice, the lack of attention given to the topic takes on new significance. The reasons for this lack of attention differ for middle-period and present-day scholars. About the former (D'Erlanger, al-Hilu, et al.), it can be said that they adopted the tetrachord as their primary descriptive device (see Section J, below). Changes in the notes used in a given maqam were generally described only when they could be expressed in terms of tetrachords. Discontinuous accidentals, by definition, cannot be expressed in such terms and were thus ignored. In the present day, attitudes about accidentals have been shaped by another factor. As we will see in Section J below, present-day theory can be characterized, in part, by a move away from the description of the melodic aspects of maqam performance. Theorists have chosen instead to focus on structural elements such as scale and tetrachords. Accidentals, perceived as falling within the dynamic realm of practice, are dismissed as being the concern of the artist rather than of the theorist. Note the example of Salah al-Din (1960) who ignores accidentals in his theoretical discussions but then is compelled to admit to their existence when he analyzes a piece of music in a "practical" section of his work.

Most theorists and musicians view accidentals as truly nonessential elements which have no place in a presentation of a mode's essential features. This was readily apparent in lessons I had in Cairo on modal analysis. When analyzing phrases from pieces in the repertoire which contained accidentals my teachers would dismiss these additional notes as unimportant: "they are just *ḥilyāt* or *zakhrafah* which do not affect the analysis." While not denying their existence, they were simply not concerned with these additional notes.

Contributing to the perception of accidentals as non-essential elements is a desire, in the present-day period, for a simplified music theory, i.e., for a theory which would facilitate the teaching of Arab music in schools and music institutes. This goal was explicitly related to the consideration of accidentals when members of a 1961-63 Cairo conference passed a resolution to recognize only eleven maqamat with the understanding that any temporary changes in the structure of these eleven modes could be dismissed as accidentals (*taghyīrāt `araḍiyyah* or *taghyīrāt ṭāri'ah*) which would not affect the naming of the maqam in question (*al-Halqah* 1964:12 and 14). For the conferees, then, accidentals are perceived as nonessential elements which stand in the way of their goal of simplification.

Nevertheless, it must be emphasized that even a cursory analysis of the use of accidentals in Arab music practice shows that these notes do not occur randomly. Rather, they are characteristic features of the maqamat in which they occur. While many accidentals might be considered non-essential features of their specific modes (for example, the F# and Eb in Rast), the frequency with which other accidentals occur (for example, E natural in Nahawand and Kurd, A# in Huzam) suggests that these latter notes are far from nonessential. On the contrary, they are near indispensable elements for the musician who wants to improvise or the composer who wants to compose in these modes. As such, it is appropriate to include these notes within the definitions of the individual maqamat.

NOTES FOR CHAPTER X, SECTION H

1. D'Erlanger does not include any reference to accidentals in his 1949 French presentation of the same basic material. Two of the three examples of "accidental" tetrachords found in the 1933 work are presented as being on a par with the modes' other tetrachords in the latter work. In the third case (1949:148) the temporary tetrachord is called a "momentary replacement."

D'Erlanger does not mention the specific type of accidentals we are considering in his descriptions of the modes in either of his works. Such accidentals do, however, appear in four instances in the transcriptions of *taqāsīm* found in his 1949 work. In each case these accidentals are not accounted for in D'Erlanger's descriptions of the modes in question (see 1949:158,186, and 208).

2. Surur, a present-day teacher at this same institute, Kulliyyat al-Tarbiyyah, provided this background information on Salah al-Din. Surur says that Salah al-Din played the piano, and that he died a long time ago prior to Surur's arrival at the institute. The two never met.

3. In his discussions of two (out of 92) modes, Salah al-Din refers to accidentals which might be interpreted as matching our restricted sense of the term. In both cases an F# is inserted into a mode that normally has F natural, the F# functioning as a leading tone to the mode's second tetrachord, in both cases a Nahawand tetrachord on G (see his descriptions of Mustaʿar and Nahawand Kabir; 1950:117 and 149). Although Salah al-Din does not fully describe the melodic phrases in which these internal leading tones occur, it seems that they both occur as discontinuous lower neighboring tones to the note G, i.e., occurring in a phrase G F# G. In both cases Salah al-Din refers to the F# as a *hassās*, i.e., a leading tone, but also as a *shakl ʿārid*, i.e., an accidental/non-essential figure.

4. al-Hilu also uses the word *ʿarad* in a similar fashion on one occasion: the note F# is said to appear as an accidental (*ʿaraḍ*) in maqam Farahfaza but to occur as a fundamental element (*asās*) in maqam Sultani Yakah (1972:95 n.1).

As was the case in D'Erlanger's 1949 publication, we find in Fatah Allah et al.'s work a number of examples of discontinuous single-note accidentals within transriptions of pieces which are supposed to exemplify the modes being discussed. The occurrence of these accidentals is not taken into consideration in the accompanying descriptions/analyses of the various modes (see 1979:38, 92, 95, 97).

5. These accidentals signs are also commonly called *`alāmāt al-taḥwīl*, i.e. symbols of change. Here there is no reference to the concept of accidentals.

6. Racy's isolation of many of the accidentals in each of 12 main maqamat within his classes at UCLA are an important exception to this statement. I am indebted to Professor Racy for pointing out many of these accidentals to me.

7. This is somewhat of a simplification. The *dlnt* must be approached from and followed by a higher note but it need not be the same note in both cases. For example, a phrase generated by a descending sequential pattern might, within maqam Nahawand, approach the E accidental from G instead of F: G Ab, F G, E F, D Eb, C D, BB C. Similarly, this same accidental might be approached from F but followed by G as in the following phrase: c Bb Ab G F E G F Eb D C.

8. Some musicians, however, use the D=/= in continuous movement; e.g., E-b- D=/= C D=/= E-b-.

9. Note that a Nahawand tetrachord on G (G A Bb c d) can be interpreted as a Kurd tetrachord on A (A Bb c d) if one were to emphasize the note A more than the G. Thus, the chromatic movement A Bb B c (as in found, on occasion, in the maqamat Kurd, Hijaz, etc.) can be interpreted as occurring within either a Nahawand or a Kurd tetrachord.

An example of a chromatic movement in maqam Kurd occurs in the popular dance piece, "`Azīzah," by Muhammad `Abd al-Wahhab. In this piece, Kurd's characteristic chromatic movement (D Eb E F) is extended upwards to include the notes F# and G in the following phrase: Bb - A G F A - G F Eb G - F Eb C D --- Eb D C D Eb E F F# G - G G - G G - D D G...

I. STARTING NOTES

The idea that the maqamat have specific notes with which their performance must begin appears in a number of the early- and middle-period sources. However, from as early as 1904, comments appear in the literature which deny that this concept exists in Arab music. It is the latter point of view which has carried over into the present-day period. In the most recent Arabic literature and in interviews and private music lessons conducted in Cairo (in 1982-83, 1984 and 1987), theorists and performers all agree that the idea does not exist in modern-day Arab music. A loose form of starting note is, however, found in the solo instrumental improvisatory genre called taqāsīm which is commonly said to dictate the initial area of focus (rather than the initial note) for many (if not all) of the maqamat. It is commonly believed that taqāsīm in most modes should start by focusing on the tonic. A few maqamat, however, are noteworthy for wanting an initial statement which focuses on a note other than the tonic. For example, it is commonly believed that taqāsīm in maqam Saba should first center on the note F; this does not, however, dictate what the initial note of the taqāsīm should be.

The following discussion of the concept of starting note as expounded by the various sources for the present study is divided into four parts, the first three dealing with the literature. The first summarizes the comments of those who recognize the concept of starting notes; the second presents comments which express only limited acceptance of the idea; the third summarizes comments which deny that the concept exists in Arab music. The fourth part records the views of my Cairo informants.

1. Sources Which Recognize the Concept of Starting Notes

The first of our sources to mention that modes have specific starting notes is Mashaqah. In his discussion of four ways that the modes differ from one another (see Chapter IX, Section C.3) he states that modes which have the same notes and the same tonic may differ with respect to "the beginning/entry into the mode" (al-dukhūl fī al-laḥn) ([c.1840] 1899:301). He offers the example of the modes Dukah and Saba (which apparently had the same notes at that time): "The mode Dukah, the entry into it [al-dukhūl fīhi] is from the note C [burj al-Rast] and rises to G, then it makes its tonic [qarār] on the note D. As for Saba, it begins from the note F and [then] rests on D..." Later on, he gives another example: Describing a maqam called Bantikar (given in Smith 1849:193 as "Bestnikar"), he comments that "... its difference from the mode Sikah is in performance only, because the entry [dukhūl] in the mode Sikah is from the two notes E-b- and C and in this [mode] it is from the two notes

B-b- and c" (ibid.:929).

In his descriptions of the individual modes Mashaqah presents a specific melodic line for each. Although he does not offer any explanation of these melodic lines, it seems clear that he is giving, among other features, a specific starting note for each mode. For example, for Nakriz he writes, "It is that you begin [with] Nawa [G], then Hijaz [F#], Sikah [E-b-] distinctly, then Husayni [A], Nawa [G] distinctly, then Hijaz, Sikah, Dukah, Rast [F# E-b- D C]" (1899:729). (See other examples in Appendix 4.)

We next find the concept in D'Erlanger's report in the 1932 Congress publication where he assigns a starting note or notes for most of the 95 modes he discusses. For example, for maqam Yakah he writes, "The performance/execution (_ʿamal_) is begun by showing the third tetrachord [a Rast pentachord on G] entering into it from Hijaz [F#] or Jaharkah [F] (beginning from the Hijaz [F#] is more correct)" (1934:188). And for maqam Rast he states, "The performance/execution is begun by touching the note [C], then rising from the note [GG] with _jins_ Rast on [GG]..." (ibid.:232).

In his 1949 work D'Erlanger again gives a specific starting note (or notes) for most modes. In a separate section in which he discusses the various elements that make up the maqamat, he calls the specified starting note

> ... an essential element of the modern Arab modes. This point of departure (mabdā or madkhal) is predetermined for each mode; sometimes the composer has two degrees at his disposal between which he is free to make his choice. The musician who would begin his composition by an other degree would commit an artistic transgression which would attract to him the criticism of the professionals. It risks, in effect, in certain cases, depriving a mode of one of its principal characteristics (1949:105).

Three other middle-period writers (al-Shawwa 1946; Mahfuz 1963-64; and al-Hilu [1961] 1972) also assign specific starting notes for most of the maqamat they discuss, often providing two or three alternative notes for a single maqam. When, in the works of D'Erlanger and these three writers, a specific note (or notes) is not specified, then a specific tetrachord is indicated. For example, al-Shawwa writes for maqam Rahat al-Arwah, "This maqam starts by performing [a] Hijaz [tetrachord] on Dukah [D]..." (1946:36). And, for maqam Suznak, D'Erlanger writes, "The performance begins by showing the first tetrachord [Rast on C] ..." (1933:232).

Three Western writers (al-Faruqi 1974:99 and again in 1981:161 and 170; Pacholczyk 1980:522; and Powers 1980:427) seem to have used D'Erlanger as one of their main sources and have presented the concept of a specific starting note as an essential element in modern-day Arab music. Two other writers (Jargy 1971:57-58; and Shiloah 1981:40) summarize parts of D'Erlanger's work and, in so doing, they too present the concept of starting note as a feature of modern Arab music.

When starting notes are indicated, they might be the tonic of the mode in question; frequently, however, the starting note is not the tonic. It might be one of the notes below the tonic (see D'Erlanger 1949:306), one of the notes of the central octave (see ibid.:214), the tonic in the octave (see ibid.:206), or even one of the notes above the octave (see ibid.:124).

2. Sources Which Express Limited Acceptance of the Idea of Starting Notes

Although D'Erlanger's report in the 1932 Congress publication includes starting notes (or tetrachords) for each maqam, the Congress' Committee on Mode, Rhythm and Composition voiced only limited approval for the idea. The committee, composed of a number of eminent scholars and musicians (including Daud Husni, Kamil al-Khula'i, and Mustafa Rida Bey of Egypt; 'Ali Darwish and Sami al-Shawwa of Syria), drafted the following statement:

> It should not be necessary to oblige the composer to start on any [particular] note in a given mode on the condition that the dominant [*dominante* in this French version; *ghammāz* in the Arabic version: *Kitab Mu'tamar* 1933:135] of each mode ... be taken into consideration at the beginning of the melody; ... the composer has complete liberty to treat the melody by adding the neighboring notes of the dominant from the scale of the mode. (*Recueil* 1934:134-135)

A single example is given to illustrate this point, namely that in maqam Muhayyar (a D-based mode) one is not obliged to begin with the note Muhayyar (d). The implication is that maqam Muhayyar's ghammāz is the note Muhayyar (d) and that one must take this note "into consideration" at the beginning of the composition or improvisation in this maqam. Unfortunately, the Congress publication does not offer further examples, nor does it clarify its understanding of the concept of dominant/ghammāz. (The concept of dominant/ ghammāz is discussed in Chapter X, Section F.)

This idea of conditional freedom is also expressed by al-Hilu:

> It was imposed on the composer, in the olden days, the restriction of the rules of beginning [al-bad' or al-istihlāl] a maqam from a [specific] place which was from its notes, but in the present period this rule has been neglected and the matter has been left to the taste of the composer on the condition that he begins from one of the agreed upon note positions. (1972:74 n.1)

Later in the same work al-Hilu explains further:

> The scholars of music theory in the past established the principle of the beginning [al-bidāyah] and the end of the maqam and they imposed on the composer the restriction of beginning [al-ibtidā'] from a specific note from the maqam.
>
> But the scholars of this [the present] period have deemed that there is no reason, scientific or artistic, for this restriction, nor is it from a principle of philosophy or art or aesthetics in any way. However they do impose upon the composer the beginning of the composition from any note which is alongside the ghammāz of the maqam in some modes but not in all of them. And they

> oblige in some others the restriction of beginning by a prescribed note and this is in some other specific maqamat as we will show in the analysis of the maqamat Saba, Muhayyar, Mahur, Hijaz Kar, Hijaz Kar Kurd, etc. (1972:79)

A review of al-Hilu's analyses for thirty-two individual maqamat (ibid.:94ff.) shows that he gives a specific starting note or notes for twenty-four of these modes. Thus the concept of starting note is more prevalent in al-Hilu's analyses than he himself admits. For the other eight modes al-Hilu indicates an initial tetrachord instead of a specific starting note. For two of these latter modes (Suznak and Bayyati), al-Hilu tells us what used to be recognized as the starting note but then he adds that this restriction is no longer followed (ibid.:108 and 118). (He does not explicitly mention any examples where one must start from a note which is "alongside the ghammāz.")

We find a similar dichotomy between stated and practiced theory in Qasis' work. Initially, Qasis states that he is against

> forcing the composer to start from a specific note or a specific tetrachord or singling out a specific path for the performance [of a mode], for in this there is but a shackling of his freedom in composing. It [also] spreads annoyance and boredom in the minds of the listeners from the repetition of the beginning [al-dukhūl] and the same lines. Rather one [should] impose the stipulation on him only that he singles out beginning from a suitable pitch and that he end with the tonic of the mode which he is using, in addition to using his good taste and his sensitivity ... (n.d.: 193-194)

But then, Qasis proceeds to ignore his own comments by indicating specific starting notes for five of the forty-three modes he discusses.

It seems, then, that for some the idea of specific starting notes is similar to the idea of separate names for transposed modes (see Chapter VIII, Section E.1). That is to say, a number of people speak for an end to these two practices but find it hard to remove them from their own writings and their own thoughts. This is undoubtably because specific examples of each are still found in the realm of performance.

3. Sources Which Deny that the Concept of Starting Notes Exists in Arab Music

Although al-Khula'i repeats Mashaqah's comments that modes sharing the same scale and tonic note may differ by the "beginning/entry into the mode" (dukhūl al-lahn) (he also repeats Mashaqah's Dukah/Saba example), it is in al-Khula'i's work that we first find evidence that the concept of starting notes was not recognized by some at the beginning of the twentieth century. In his description of the individual maqamat, al-Khula'i attributes the concept of a fixed starting note to Turkish rather than Arab performance practice. For example, concerning maqam Rast he writes, "According to Turkish practice the ... mode begins from [C]" (1904:41). And for maqam Suznak: "According to Turkish practice, this mode begins from the note F to the note G" (ibid.). Nowhere does al-Khula'i mention a specific starting note with respect to Arab music, thus we must conclude that he did not consider the idea to be one of the elements that define the Arab maqamat. [1]

From an article in the journal Rawdat al-Balabil it is clear that, despite al-Khula'i's stance on the subject, the issue of the starting note was still being debated in Egypt in the early twentieth century. For here we find both a statement against such a requirement and impassioned criticism of those who dogmatically believe in the same:

> The beginning in singing or playing [an instrument] from a specific note among the notes of a mode is not a binding rule ... as some in Egypt and Turkey claim. Rather, it is necessary that there is good taste [al-dhūq al-salīm]; this is the rule, and this is the precept and this is the principle.
>
> Some of them adhere to a musical rule and consider it among the inherent principles in the composition of melody and text. This is that the beginning [al-bad'] (or the start [al-shurū'] of the composition as some of them call it) is either from the third degree or the fifth or the seventh of the basic scale ... of the mode. And if they heard a melody ... in which the composer began from a degree other than these sacred degrees of their practice, they consider it a detestable musical mistake and an assault on the rules and established musical principles ... and they reject the composer and the art and the science even if his melody were on the highest level of achievement and sweetness. Whereas they put their noble stamps on other melodies which are all but free from sweetness and beauty for nothing more than that it is composed in accordance with their revealed rules ... (Rawdat al-Balabil 1921:170)

al-Sabbagh, a Syrian writer, acknowledges that some assume strict rules of movement for each mode including a specific starting note, but he speaks against such ideas: "... there is no benefit from all this except to restrict the freedom of the compooser and his imagination. I believe that the composer has complete freedom to begin from any note ..." (1950:35). See similar comments by Qasis, quoted above.

These writers reject the concept of a specific starting note and in so doing they acknowledge that some do in fact follow such a restriction. The vast majority of present-day writers, however, do not even mention the concept of starting notes. (See, for example, al-Hifni c.1946; Salah al-Din c.1950, 1950, and 1960; Fahmi 1965; Farah 1974; Kamil 1975; Muhammad 1984; Mash`al n.d.; and Surur 1986.) The concept is also ignored (except for a single comment) in the numerous practical works, i.e., method books and collections of music transcriptions. [2] (See for example, `Arafah and `Ali 1976; al-Jabaqji 1976; Fatah and Kamil 1982; Nasir 1980; Mash`al 1979.)

4. Views of Present-Day Cairo Theorists and Musicians

During fieldwork in Cairo, I found that the concept of a specific starting note for each mode does not exist there, either among present-day theorists (including teachers at the major Cairo music institutes and other acknowledged music scholars) or among musicians.

When arguing against the existence of such a concept those interviewed would commonly reel off a number of compositions in a single maqam which start from different pitches. For example, among pieces in maqam Bayyati:

	starts on:			
dūlāb Bayyati (Jabaqji 1976:86)	d	preceded	by:	G (or A) B-b- c
samā'ī Bayyati al-Thaqil	c	"	" :	A Bb
"Ya Salat al-Zayn"	Bb			
dūlāb Bayyati ('Arafah & 'Ali 1984:26)	A	"	" :	F G
samā'ī Bayyati al-'Aryan	G			
dūlāb Bayyati ('Arafah & 'Ali 1984:26)	F	"	" :	D E-b-
taḥmīlah Bayyati ('Arafah 1976:76)	F	"	" :	D
"al-Hubb Kidah"	D	"	" :	BB-b- C

This can be repeated for every maqam, showing clearly that a composer has complete freedom concerning the note with which he starts his compositions.

Most musicians add, however, that there is some restriction on the performer of *taqāsīm*. Generally, one should start a *taqāsīm* by presenting the tonic region of the maqam at hand. This does not mean a specific note, but only a specific area of focus. George Michel (personal communication 5/10/82), for example, offered the following

possibilities for beginning a Bayyati taqasim: GG AA BB-b- C D D D D ...; GG AA, GG BB-b-, A C C, B-b- D D D D ...; AA D D D ...; C BB-b- C D D D ...; D G G F G F E-b-, F E-b- D D D ...; F E-b- E-b- F F E-b- D D D ... [3]

There are a few maqamat, however, whose *taqāsīm* commonly begin in an area other than the tonic region in present-day practice. The most common of these is the D-based maqam Saba. *Taqāsīm* in this mode often start by focusing on the note F. (Mashaqah and the main middle-period writers all agree that maqam Saba begins with the note F; see Mashaqah [c.1840] 1899:301; D'Erlanger 1933:297; al-Hilu 1972:122; Mahfuz 1964:351; and al-Shawwa 1946:69.) [4] There are also a small number of modes which are occasionally recognized as requiring a descending progression; i.e., *taqāsīm* in these modes must, according to some, start in the upper octave and then descend (rather than the more common procedure of starting at the tonic and ascending). Such modes were common in the early- and middle-period theory. However, their descending nature has been lost among most present-day theorists and musicians. For these latter individuals, these modes are understood to start as most other modes, i.e., in the region of the tonic. Modes which are occasionally described as "descending" in the present day include Muhayyar, Kirdan, and Mahur. Note that these three maqam names are also names for three notes in the higher register of the Arab general scale: Muhayyar is d; Kirdan is c; Mahur is now recognized as B but was previously the name for the note c (see Chapter II, above). The association of these modes with the upper register is thus unescapable. (Descending modes are also discussed in Chapter IX, Sections C.3 and D.1)

Terms for the Concept of Starting Note

Despite comments to the contrary in recent Western sources, there is no commonly accepted term in modern-period Arab music theory or practice for the concept of starting note. From the earliest modern-period sources to the most recent works, the concept is referred to (if at all) only with descriptive phrases rather than the use of specific terminology. Mashaqah, for example, uses the phrase, "The entry [al-dukhūl] into [this mode] is from the note [C]" [c.1840 in 1899:301]). Virtually the same sentence appears in al-Khula'i (1904:38). In his 1933 Arabic-language work, D'Erlanger uses a number of different phrases, often including wording similar to Mashaqah's. For example, he writes, "The entry [al-dukhūl] must be from [G]" (p.193), or, "The performance/work begins (yabda' al-'amal) by showing the third tetrachord, entering into it (dukhūlan ilayhi) from the note [F#]..." (ibid.:183), or, "The beginning (istihlāl) is from the first tetrachord, entering into it from the note [C]" (ibid.:247). He also uses, "The beginning (bad') is from the note [C]" (ibid.:241). al-Shawwa (1946), Mahfuz (1963-64), and al-Hilu (1972) use these same and other similar phrases. These examples show that there is no specific term not only for starting note but also for the beginning of a performance. Words such as *al-badʿ*, *al-bidāyah*, *al-ibtadā'*, *al-istihlāl*, and *al-shurūʿ*, all meaning "the beginning," are used interchangeably. (See the quotes on the previous pages of this section.)

In his French-language work, D'Erlanger names two Arabic "terms" for the starting note; i.e., *mabdā* and *madkhal* (1949:105; this passage is quoted on p.633above). These two terms do not appear in any of the Arabic-language works used for the present study (including even D'Erlanger's 1933 Arabic-language work). *Mabdā*, or more correctly *mabda'*, means "starting point, beginning"; *madkhal* means "entrance, anteroom, entrance hall, lobby." Thus, on the basis of their literal definitions, these words are appropriate for describing the concept of starting note. However we must differentiate between words which might be appropriate to describe a particular phenomenon and accepted technical terms. The available evidence makes it clear that these two "terms" fall into the former category. Later Western writers, including al-Faruqi (1974:99 and 1981:161 and 170), Pacholczyk (1980:522), and Powers (1980:427) seem to have used D'Erlanger as their source when attributing the word *mabda'* as the term for this concept. Jargy (1971:57-58) and al-Shiloah (1981:40) include a summary of D'Erlanger's presentation and thus they too perpetuate the impression that *mabda'* is a recognized term. Powers (ibid.) offers an alternative term, *āghāz*, for this concept, however this too does not appear elsewhere in the literature. Present-day Cairo theorists and musicians with whom I spoke all agreed that the words *mabda'*, *madkhal*, and *āghāz* are not used as technical terms in Egypt (for example, Michel 1/83; Surur 6/1/87; Amin 5/29/87; al-Kurdi 6/3/87). Racy reports that these words are also not used as musical terms in present-day Lebanon (personal communication, 6/29/86).

Concluding Remarks

While specific starting notes were an important feature in early- and middle-period definitions of the individual maqamat, the existence of such notes is either refuted or ignored in the present-day theory. In present-day practice the tonic region has become the standard initial area of focus for free-standing *taqāsīm* (see note 3) in a vast majority of the maqamat. As with other aspects of early- and middle-period modal conceptualization that have not carried over to the present day, we are left with the task of explaining the apparent disappearance of the concept of starting note.

Al-Hilu (1972:94 n.1) suggests that there was a "modern musical renaissance," presumably sometime between 1933 (the date of D'Erlanger's Arabic-language work) and 1961 (the date of the first edition of al-Hilu's work), one of the features of which was the rejection of a previously existing starting note restriction. This idea and general time frame coincides with what I have referred to in Chapter I as the end of an academic period of Cairo-based performance practice (in c.1930).

Despite the comments in middle-period sources, it is likely that the rule of a specific starting note did not find many adherents in Cairo at any time in the twentieth century. Note the statements in al-Khula'i 1904 and Rawdat al-Balabil (1921) (both quoted above) and the absence of any mention of the concept by later Egyptian writers. The sources from Lebanon and Syria are inconclusive regarding the extent to which this concept has been followed in these countries. It is possible that the idea was common in Syrian lands but not in Egypt. This would explain the starting note concept in the works of D'Erlanger (whose main informant was the Syrian 'Ali Darwish), Mahfuz (who publishes from Damascus) and al-Hilu (who publishes from Beirut). [5] But we also have al-Sabbagh, a Syrain musician and theorist, (his 1950 and 1954 works were published in Aleppo, one of the main centers of Syrian music) who speaks against the concept. Racy also reports that the concept of starting note is not explicitly recognized in present-day Lebanon (personal communication, 6/29/86).

It is possible that the concept was not particularly prevalent in the Arab Middle East, that the idea was expounded only by those affected by Turkish performance practice (where the concept of a starting region, if not a starting note, is widely acknowledged: see Signell 1977:48-49). This is suggested by al-Khula`i's comments where he recognizes the starting note concept only in Turkish music (and not in Arab music). This is further suggested by the fact that D'Erlanger's main informant, `Ali Darwish, studied at an Istanbul music conservatory.

The disappearance of any mention of starting notes in the present-day theory should also be seen as part of a larger metamorphosis of Arab music theory in the present-day period. As will be seen in the following section, the present-day theory makes a break with theories of earlier periods by eschewing descriptions of the dynamic elements of the melodic practice. Present-day descriptions of the maqamat present scales with little or no mention of how the modes move in performance. There is no place for specific starting notes in this type of theory. The new theory ("clean and unencumbered") can be seen as a direct response to the desire for a new, simplified, and standardized theory, one which emulated Western models and could be used by teachers and students of Arab music in institutionalized settings.

And finally, if specific starting notes were indeed an important feature of Arab performance practice in the past (this is surely the understanding one gets from early- and middle-period works), [6] then the metamorphosis has not been confined to the realm of music theory. In most cases, present-day musicians do not know and do not follow the specific examples of starting notes that are contained in the early- and middle-period theory. We might hypothesize that the adoption of the concept of single-octave scales and the accompanying growth of importance in the roles and functions of the tonic note has brought about a shift away from conceptualizing notes other than the tonic as starting notes.

NOTES FOR CHAPTER X, SECTION I

1. In his comments on the mode Nahawand Kabir, al-Khula'i mentions starting notes without his otherwise standard phrase, i.e. "according to Turkish practice": "It begins from F# to G ..." (ibid.:42). We are inclined to consider this an oversight on al-Khula'i's part.

al-Khula'i does, however, admit one instance of a loose form of starting note restriction. He describes maqam Kirdan as having the same "structure as [maqam] Rast exactly except that it differs from [Rast] in that the beginning [al-shurū'] of a composition in it is from the higher [register] to the lower [register]" (1904:42). (See discussion of descending modes, below.)

2. The single comment occurs in a work by Qatr. For maqam Husayni, Qatr writes that "it starts by bringing out the note Husayni [A]" (n.d.:51). Qatr does not include a similar comment for any of the other twenty-three modes he presents.

3. However, taqāsīm which follow a piece in the same maqam commonly forgo a statement of the tonic area, beginning straightaway with a higher area of focus. In the D-based maqam Bayyati, for example, such a taqāsīm might begin by focusing on G.

4. Jihad Racy at UCLA adds that taqāsīm in the D-based maqam Hijaz often begin by focusing on the note G. Similarly, taqāsīm in the C-based maqam Nahawand often begin with the note Eb falling to C (personal communication 5/86).

5. However, we must emphasize the central role that D'Erlanger's work played for al-Hilu and Mahfuz, both of whom quote extensively (without citation) from D'Erlanger's 1933 report. Thus, the examples of specific starting notes in al-Hilu's and Mahfuz's works cannot be considered as completely independent confirmation of the phenomenon.

6. The concept of a specific starting note for each mode was clearly a part of the pre-modern music theory. Shiloah, for example, writes one of the "major characteristics of the [pre-modern] modal system" was that "[i]ntervallically identical groups are considered different when they do not have the same point of departure, although they may repose on the same finalis" (1981:38-39). As evidence he mentions a treatise by Shams al-Din al-Saydawi al-Dhahabi which he tentatively dates from the 15th century (see Shiloah 1979:83-85). al-Dhahabi used a form of staff notation to

describe a mode's features, including the "note of departure" (ibid.:84). Laborde (1780:183-190) describes this notation system and offers two examples with French translations. In the notation, the initial note is called ma'khadh (literally, "the place from which one takes something, source"; Wehr 1976:8) and is apparently indicated for every maqam. (See Hafiz 1971:175-177 who summarizes Laborde's presentation.) Shams al-Din's notations are discussed further in Section J below.

J. SPECIFIC PATHS FOR THE PERFORMANCE OF EACH MODE

In Arab music the idea has existed for centuries that the melodic unfolding of a maqam in performance is not left totally to the imagination of the performer or composer; rather, each mode has a characteristic melodic progression which the performer and composer must follow when presenting a maqam. Minimally this progression might dictate one or more beginning notes and the final note; more detailed understandings of a mode's characteristic progression might also dictate aspects of contour, ambitus, the use of accidentals, alternate tetrachords, characteristic melodic leaps, etc. While many of the other elements addressed in the present study (including scale and tetrachords) deal with a mode's static structural features, it is in statements dealing with the characteristic melodic progression for each maqam that we find the most explicit comments in the literature about the dynamic aspect of the maqamat.

The modern literature can be divided into three subperiods based on whether or not writers include comments concerning specific paths for the performance of each mode and also on the form which such comments take. This section will discuss the concept of characteristic progressions chronologically, starting with an example from the fifteenth century and then moving through the modern period's three subperiods. It will also consider how present-day musicians conceptualize movement within a maqam. For each period we will seek to understand some of the roots and reasons for the existing stance regarding the conceptualization of a mode's characteristic melodic movement.

The idea that each mode has a specific path which its melodic unfolding should follow predates the modern period. The earliest evidence of such an idea mentioned in our sources refers to a work by Shams al-Din al-Saydawi al-Dhahabi called Kitab al-an'ām bi ma'rifat al-anghām (The Book of Attentive Consideration of the Science of Melodies) (Shiloah 1979:83-84 and Laborde 1780:180-190; Laborde gives the author as Schemseddin el Saidavi el Dimeschki). Trying to date this work, Shiloah notes that one of the copies of the treatise is dated 1500; however, Shiloah suggests that the author might have lived as early as the late-thirteenth to the fourteenth centuries.

In order to describe the melodic movement characteristic of each mode Shams al-Din "uses an eight-line staff of different colors and places the names of the degrees between the lines" (Shiloah 1981:38). (Laborde [1780:180] writes that this staff may include as many as twelve or more lines depending on the range of the mode.) Next to the note names Shams al-Din places symbols which describe what Shiloah calls the "guiding contours" of the melody (1981:38). Laborde lists and explains eleven such symbols including ones which 1) indicate the first note that is to be played; 2) describe the melodic movement in terms of a series of ascending and/or descending lines including 3) the particular notes with which these movements should begin and end; 4) whether these movements should be note by note or by leap; 5) whether they should be performed quickly or slowly; and 6) the note with which the performance should end. Laborde gives two examples of this notational system. These examples describe the modes Zirafkand and Hijaz. For maqam Hijaz, Shams al-Din indicates the following movement (adapted from Laborde 1780:188-190 [1]): start with G, then descend note by note to D, then ascend quickly to G, then descend F#, E-b-, D, and end on D. While offering only minimal information, it is clear from this example that from a very early period the maqamat had, in the minds of at least some members of the music culture, specific paths which their melodic unfolding was to follow in performance. [2] (See also Villoteau 1826:33-39 for descriptions of characteristic melodic movement in two medieval treatises.)

Descriptions of characteristic melodic movement are also found in a 1700 work on music of the Ottoman empire by Dimitrie Cantemir. Here the descriptions, called ḥukm (literally, rule or provision), are presented in prose passages. The necessary movements are indicated for each mode by referring to the notes with their Arabic/Persian/Turkish note names (Walter Feldman, personal communication 12/28/87).

The First of the Three Modern Subperiods: The Early Period

The first of the sources to include the idea that there is a specific path for the performance of each mode in the modern period is Mashaqah (c.1840). This idea appears in two sections of his work, first within his four-fold classification of different types of modes and later in a section where he presents a specific melodic line for each of ninety-five modes. In the former section (discussed in Chapter IX above), Mashaqah states that modes which have the same notes and the same tonic will differ in "the execution of [their] performance" (ijrā' al-'amal) in two ways: a) in the manner of "moving from one note to the other," and b) in the note or notes used to begin the performance (this second point, specific starting notes, is discussed in Chapter X.I, above) (1899:300-301; 1913:76-77). According to Mashaqah, then, it is necessary, when learning a given mode, to learn not only the notes used but also the specific manner in which melodies move in that mode. His four-fold classification also isolates modes such as Muhayyar and Dukah which share the same notes but differ in that the former must be played in two octaves (i.e., one must start in the second octave and then descend to the first octave) while the latter is begun in and apparently confined to the first octave.

The section where Mashaqah presents a specific melody line for each mode (1899:726ff.; 1913:87ff.) is entitled "identification of the modes [*alḥān*] ... and the manner of their performance/execution [*kayfiyyah ijrā'-hā*] ..." Mashaqah's melody lines convey a similar body of knowledge as those of Shams al-Din and Cantemir. While Shams al-Din used a notational system for conveying the necessary information, Mashaqah follows Cantemir's lead and relies on prose descriptions. In Mashaqah's melody lines, we find 1) a starting note; 2) one or more melodic phrases; and 3) a final note. In addition, Mashaqah occasionally indicates 4) notes which are to be either emphasized or played only lightly; and 5) whether a movement should be note by note or by leap. Each melody line thus presents a succinct statement of the mode's characteristic melodic progression.

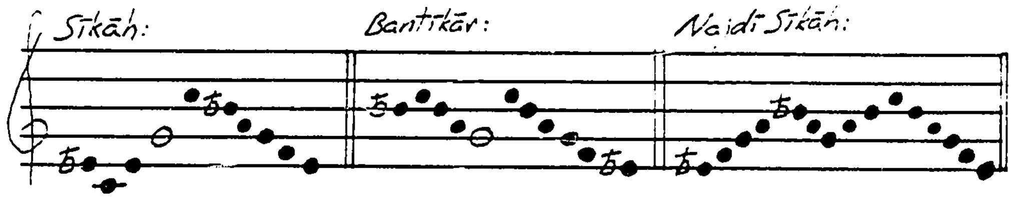
For examples of Mashaqah's melody lines, we will here focus on a small number of modes which Mashaqah tells us share the same notes and tonic but differ in the manner in which they are performed. (They differ "in execution only" [*fī al-ijrā' faqaṭ*]; see 1899:929, 930, and 727; 1913:101, 102, and 88). These examples will serve to illustrate the kinds of differences which exist among similar modes.

Mashaqah gives three modes which use only the fundamental-scale degrees and end on the note E-b-: Sikah, Bantikar (Bastanikar?), and Najdi Sikah. Mashaqah describes these as follows:

> Sikah, "it is Sikah, then Rast, then Sikah, then Nawa distinctly, then Mahur, Awj, Husayni, Nawa, Jaharkah, Sikah... ([c.1840] 1899:928; 1913:99).

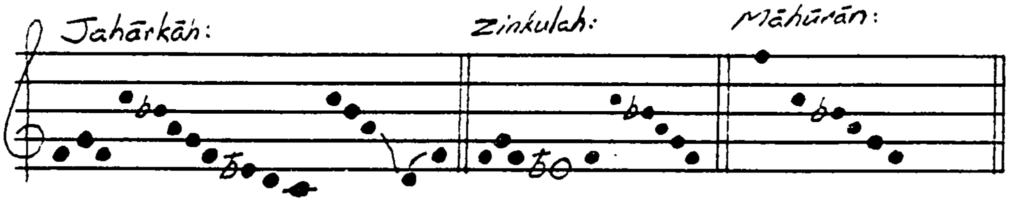
> Bantikar, "it is Awj, then Mahur, Awj, Husayni, Nawa distinctly, then Mahur and you descend note by note to Sikah ... Its difference from the Sikah mode is in the performance/execution only, because the entry [dukhul] into Sikah is from the two notes Sikah and Rast and in this [mode] it is from the two notes Awj and Mahur" (1899:929; 1913:101).

> Najdi Sikah, "it is Sikah, then Jaharkah, Nawa, Husayni, Awj, Husayni, Nawa, then Husayni, Awj, and Mahur, then you descend note by note to Sikah. This mode also differs from Sikah in the performance/execution only" (ibid.).



One of the main differences among these modes, as Mashaqah points out, is their beginnings. There are also distinguished by their contours: Sikah descends from the tonic to C, then ascends to c, then descends to E-b-. Bantikar starts higher up the scale at B-b-, ascends to c, and then descends in two movements to E-b-. Najdi Sikah starts with the tonic and ascends immediately, first to B-b- and then to c, and then descends to E-b-. Ambitus is also a factor: all ascend up to c but only Sikah descends below the tonic.

Differences in starting notes, contour and ambitus are seen again in the modes Jaharkah, Zinkulah (or Sharankulah), and Mahuran, all of which share the same basic scale: Jaharkah is given as, "it is F G F c Bb A G F E-b- D C, then c Bb A to D to F..." (Mashaqah [c.1840] 1899:930; 1913:101-102). Zinkulah, "it is F G F, E-b- distinctly, then F c Bb A G F; this mode differs from [Jaharkah] in execution only" (ibid.). And Mahuran, "it is f, then you descend to c, then Bb A G F ..." (ibid.).



Mashaqah's Melody Lines: a) His Sources; b) A Long-Standing But Now Defunct Tradition

We know virtually nothing about Mashaqah's sources for the melodic lines he gives for each mode. The ninety-five modes are said to be those prevalent among the Syrian cognizanti [*`ulamā*] of his time ([c.1840] 1899:932; 1913:104). In a few cases Mashaqah indicates that he has reservations about the specific melodic line he has given but that the given is "in accordance with the practice of the masters of this art" (*ittibā`an li-iṣṭilāḥ arbāb hadhā al-fann*; 1899:728) or "according to the followers of the art" (*ittibā` li-ahl al-ṣinā`ah*; ibid.). [3] Elsewhere he comments, "This is the determination of the masters of the art" (see 1899:729 and 885; 1913:90 and 94) or simply, "That is how they have described it" (1899:888 and 1899:930; 1913:97 and 101). From these statements it seems reasonable to assume that Mashaqah's method for describing the characteristic movement of each mode was somewhat common in Syria at that time and would have been understood by the Syrian master musicians of that period.

Similar presentations appear in Turkish-language works as early as the beginning of the eighteenth (Cantemir 1700) and as late as 1862 (Hashim Bey's Majmu'at al-Maqamat). Indeed, in one instance Mashaqah acknowledges a Turkish source for his melody line. After describing maqam Hijaz Kah (Hijaz Kar?), he writes, "This is how the cognizanti of Constantinople have described [this mode]" (1899:730; 1913:91.) Mashaqah's method for describing characteristic melodic movement, then, must be seen as part of a larger Turko-Arab tradition.

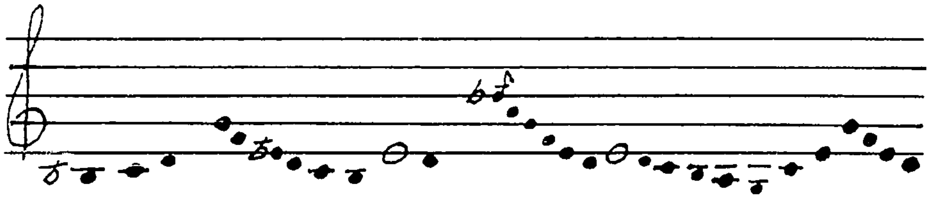
Whatever the period and region in which it once flourished, the tradition of describing the Arab modes by giving a specific melody line for each ended soon after Mashaqah wrote his work. With but two exceptions, it does not occur again in any of the subsequent Arabic-language sources used for the present study. [4] As the tradition disappeared, so did the ability to understand these specific melody lines, i.e., how to use them as "quiding contours" for for generating new but similar melodies. Mashaqah himself is of no help on this point; he does not explain his presentations. In the absence of any living tradition for interpreting such lines, Arab theorists and musicians over the last century have apparently been at a loss to understand them. Mashaqah's descriptions have become a historical oddity. Ronzevalle, for example, reveals his own inability to grasp Mashaqah's melody lines as the basis for new composition or improvisation when he writes, "The meaning of these disjointed words (kalimāt mutaqaṭṭi`ah) is that they are the sequence of notes which it is necessary for the musician to perform" (1899:727). Present-day musicians and theorists in Cairo expressed total lack of comprehension when they were shown this part of Mashaqah's work (this during the summer of 1987).

In order to illustrate some of the problems one is confronted with when trying to understand Mashaqah's melody lines, we will discuss four points, i.e., lines which give only minimal information, lines which are exceedingly complex, melodic leaps, and Mashaqah's method of indicating notes which should be emphasized or played only lightly.

A number of Mashaqah's lines raise problems because they give only minimal information. The mode, `Iraq, for example (1899:728; 1913:89), is described as, "It is Nawa [G], then it descends note by note to `Iraq [BB-b-]," i.e., G, then F E-b- D C B-b-. Similarly, Busalik (also called `Ushaq) is described as, "it is Husayni [A], Nawa [G], Jaharkah [F], Busalik [E], and Dukah [D]" (1899:886). The description provided for maqam Rast (given in Appendix 4), while considerably more detailed, raises the question of minimal range, for the given melody line does not ascend above the note G (it ranges from GG to G). Should we interprete Mashaqah's presentation as excluding an ascent above G? From the perspective of what later writers have written about maqam Rast, the descent to GG can be seen as a characteristic of the mode; however, beyond this point the modern-day musician/theorist can only be puzzled by the lack of information concerning the range above G. Today, for example, one would have to describe the notes G A B-b- c, i.e., a Rast tetrachord on G. Should we assume that the now typical ascent to the octave is a relatively new feature in maqam Rast. Based on the what Mashaqah tells us we simply do not have enough information to answer this question with authority. [5]

A number of Mashaqah's maqam descriptions raise problems because of their complexity. A few are so detailed that one wonders if he did not have a specific song or instrumental composition in mind. For example, for the mode `Iraq Zamzami he writes,

> It is BB-b- C D, then G, then descend step by step to BB-b-, then E-b- distinctly to D, then hint at Bb and descend note by note to D, then E-b- distinctly, then descend note by note to GG, then C, then E-b-, then G, then descend note by note to D (1913:89).



It is not that it is impossible to treat this statement as the basis for improvisation. A classical North Indian musician might have no trouble in using this type of line in this way. However, in the absence of any living tradition for dealing with such presentations, Arab theorists and musicians since the late-nineteenth century have apparently been unable to understand this section of Mashaqah's work.

One of the clearest problems with Mashaqah's descriptions is that we cannot be sure how to interprete the melodic leaps found in a large number of his melody lines. In the 'Iraq Zamzami example cited above there are leaps from D to G, from BB-b- to E-b-, from D to Bb, and then from GG to C to E-b- to G. Note also the leaps in his description of maqam Rast (see Appendix 4) and maqam Sikah: Sikah is "E-b-, then C, then E-b-, then G distinctly, then c B-b- A G F E-b-" (1913:99). Are these leaps optional or required? The Sikah example serves to show the extent of the problem. If the leaps from E-b- to C and C to E-b- are required, then the question arises, "Does maqam Sikah use the note D?" Based on the information given we might assume that this note should not be used. It should be stated here that all the modes in present-day practice are heptatonic, i.e., they use at least one variety of the seven scalar degrees per octave. Is Mashaqah telling us that some of the modes were not heptatonic in his day? It might be safer to assume that Mashaqah has documented a characteristic leap but that the note D could appear at times. [6] This assumption is undermined, however, in Mashaqah's comments for maqam Nahawind (this is not the modern Nahawand). Here, Mashaqah explicitly states that this mode does not use two scalar degrees:

> It is G d Bb A G, F and G repeated, F Eb C, then G. This mode omits [yutlif; literally, "destroys, annihilates"] two fundamental pitches; these are c and D... ([1840] 1899:930; 1913:102)

The Sikah and Nahawind examples raise doubts about the intentions behind the other instances of melodic leaps in Mashaqah's work.

Occasional comments that a given note should be either emphasized or played only lightly present a two-fold problem for those trying to understand Mashaqah's melody lines. For one, his choice of words for conveying these distinctions is idiosyncratic and not fully understood. Eli Smith, writing in English, and Ronzevalle, writing in Arabic and French, offer the following translations of the words Mashaqah has used. Mashaqah uses maẓharan (see 1899:728,729, etc.) or ẓahran (ibid.) to indicate that the note in question should be played "distinctly" (Smith 1847:185) or "with accent/

stress" (Ronzevalle 1913:38). Talmīḥan or the verb talammaḥ (ibid.:728, 729, etc.) is used to indicate that a note should be "glanced at" (Smith ibid.) or played as an "appoggiatura" (Ronzevalle ibid.). Makhfiyyan ("hidden, concealed"; ibid.:882) is used to mean "obscurely" (Smith ibid.:188) or "concealed" (Ronzevalle ibid.:40). Smith comments,

> The words I translated 'distinctly,' 'glanced at,' 'obscurely,' and 'lightly touched,' appear to be used technically, and their technical meaning I do not fully understand. The last three appear to be used interchangeably. (1847:185)

The use of one qualifying word, muraghraghan, stumped Ronzevalle: he comments that he could not find the word in any dictionary nor could any artist or philologist explain it to him (1913:38; see also Ronzevalle 1899:301 n.3.)

Mashaqah's use of these words is also not fully understood because he includes them only sporadically. Many of his melodic lines contain no such comments (see his description of maqam Rast). Others contain as many as four notes which are indicated as requiring emphasis. (See his descriptions of the C-based modes Banjkah and Sazkar: E, F, G, and B-b- are emphasized in the former; D, E, G, and A in the latter.) Similarly, there are only a few scattered comments indicating that a given note should be played lightly.

Despite the problems raised by Mashaqah's descriptions, his melody lines for ninety-five modes must be highly praised. The amount of detail he has included is extraordinary, in many cases showing remarkable insight. Consider, for example, the following observations he has recorded: the use of an F# accidental in maqam Husayni (quoted in Section H above); the use, in Egypt, of the note Ab within maqam Sikah, a mode which has A natural in Syria; the common rendering of maqam Hijaz with the note F=/= instead of the prescribed F#; Rast's characteristic descent to GG; and his recognition of melodic leaps that are still found, on occasion, in the present-day practice.

Finally, we offer the following observations about contour. Only 27 of the 95 modes start with their tonic note. The other 68 start above the tonic, 53 of these remaining above the tonic until the final cadence, the others dropping to the tonic in the middle of the melodic line and again returning to this note at the end. About a third have a clear descending progression. The arch-like contour which is commonly said to be the dominant contour in present-day improvisations (i.e., starting at the tonic, rising to the octave, and then closing at the tonic) is rare in Mashaqah's melody lines, occurring in only 14 or less modes. And finally, in all but 17 cases the closing cadence occurs within a descending phrase.

The Second of the Three Modern Subperiods: The Middle Period

In D'Erlanger's report within the Congress publication (1933:182ff.), we find a new method for describing melodic movement. A number of subsequent writers follow D'Erlanger's method and together make up what we have labeled the middle-period school of modern Arab music theory. Perhaps the most significant development in this period is the reintroduction of tetrachordal theory to the analysis of the modes. Armed with tetrachordal theory and the concept of scale (both absent in early-period descriptions of the maqamat) middle-period writers begin their presentations of each mode by first providing a structural analysis; i.e., the mode's scale and constituent tetrachords are identified. Then, the melodic movement of each mode is described. Here, rather than naming the various notes of a specific melodic line--as was the practice in early-period works--melodic movement is described by naming the various tetrachords in the specific order in which they should played. [7] See, for example, D'Erlanger's description of the melodic movement in maqam Hijaz, quoted on p.505 above. [8]

D'Erlanger's presentations first appear in Arabic in the 1932 Congress publication. This work contains descriptions of the melodic movement of ninety-two modes. [9] An expanded French edition (1949) contains descriptions of the movement in 119 modes. The earlier work served as a model for a number of subsequent works. (In contrast, the French-language publication has not been an influential work in the Middle East.) Most directly influenced were al-Hilu (1961; 2nd ed. 1972, published in Beirut), who describes the melodic unfolding of thirty-two maqamat, and Mahfuz (1964 and 1965, published in Damascus), who describes the movement of twenty-two modes. al-Hilu and Mahfuz copy large sections of D'Erlanger's Arabic work verbatim. Another middle-period writer, al-Shawwa (1946, published in Cairo), was undoubtably influenced by D'Erlanger's work; however, his descriptions of the melodic movement of 108 modes do not rely directly on what D'Erlanger has written. Thus, al-Shawwa's work must be considered a completely independent effort.

We offer the following observations of first D'Erlanger's and then al-Shawwa's presentations of the modes. (Comments regarding D'Erlanger's presentations generally hold for those of al-Hilu and Mahfuz.) First, for each maqam, D'Erlanger presents separate ascending and descending scales. These two scales, usually given a range of nearly two octaves, are then analyzed in terms of their constituent tetrachords, four ascending and four descending. The tetrachords are numbered according to their position in the ascending and descending scale: first, second, third, fourth, and fourth, third, second, first, respectively. The first tetrachords are based on the first degree of the scale; the second tetrachords are generally based on the third, fourth or fifth degrees of the scale; the third tetrachords are commonly based on the octave note; and the fourth tetrachords are commonly based in the middle of the second octave. When he describes the melodic movement of each mode, D'Erlanger refers to the different tetrachords by their number. In many cases a maqam is assigned more than one tetrachord for a specific part of the ascending and/or descending scale. For example, maqam Rast in descent is said to have two second tetrachords on G, i.e., Rast and Nahawand (Busalik). Rast's tetrachords are given as follows (1933:227):

ascending:
  1st tetrachord: Rast on C
  2nd tetrachord: Rast on G
  3rd tetrachord: Rast on c
  4th tetrachord: Rast on g

descending:
  4th tetrachord: Rast on g
  3rd tetrachord: Rast on c
  2nd tetrachord: Rast or Nahawand [Busalik] on G
  1st tetrachord: Rast on C

Second, the idea that each mode has separate ascending and descending parts is then carried over to the descriptions of the melodic movement: first the ascending movement is described, then the descending movement.

Third, although the tetrachords are listed in simple ascending and descending order, a review of D'Erlanger's descriptions (1933 and 1949) of the movement for each maqam reveals that a majority of the maqamat do not, according to D'Erlanger, follow a simple ascending progression in the first part (called the ascending part) of a performance. For example, only forty-five of 101 modes are indicated as starting with their first (their root) tetrachord. [10] Of the fifty-six modes which do not start with the root tetrachord, twenty-one begin with the second or third tetrachord and then descend to the root tetrachord before completing the ascending progression; in other words, the ascending phase of their development includes a descent to the first tetrachord. The remaining thirty-five modes start with their second or third tetrachord and do not present their root tetrachord at all in the ascending part of the movement; it is not until the very end of their melodic development, i.e., at the end of the second, the descending part of the performance, that these modes finally present their first tetrachord. In all, twenty-two of the maqamat start in the octave (see, for example, 1949:118,120,202,218, 222,268,274, etc.).

examples of the order in which a mode's tetrachords should be played (according to D'Erlanger), showing three positions for the first appearance of the root tetrachord:

a) the root tetrachord appearing at the beginning: 1234321.

b) the root tetrachord appearing in the middle of the ascending progression: 21234321 or 321234321.

c) the root tetrachord appearing only at the end: 234321 or 34321.

Fourth, apart from those modes which include a descent to the first tetrachord within their "ascending" progression, there are eleven modes which include a descent to their second tetrachord, again within their "ascending" progression. The order of the tetrachords in these modes might, for example, be 3234321, or 123234321, or 1324321 (see 1949:118,120,122,246, 250,258,306, etc.).

From these first four observations it is clear that D'Erlanger's presentations contain a serious internal contradiction: while he presents first an ascending and then a descending scale for each mode and numbers the tetrachords in each mode as first, second, third, and fourth in simple ascending order, in fact a majority of the maqamat do not follow a simple ascending progression. This contradiction highlights the differences which exist between two distinct ways of perceiving the maqamat. When viewed as static entities, i.e., when analyzed in terms of scale and tetrachords without consideration of the aspect of melodic movement, then the modes are perceived as first ascending from the tonic to the octave and above and then as descending back to the tonic. However, when the aspect of melodic movement is taken into consideration, then this perception is shown to be simplistic or even false. [11]

Fifth, while descriptions of the ascending melodic movement often present crooked or oblique progressions through the modes' ascending tetrachords, the descending halves of these descriptions consistently call for the modes' descending tetrachords to be played in simple descending order, i.e., 4321. (In 101 modes there are only two exceptions to this simple descending pattern; see 1949:164 and 192.)

Sixth, twelve of the modes are indicated as including a tetrachord below the root tetrachord. These auxiliary tetrachords occur either at the beginning or at the end of the melodic movement. (See 1949:236,278 for this tetrachord at the beginning and ibid.:208 for this tetrachord at the end. For one mode, maqam Rast [ibid.:178], this tetrachord in indicated at both the beginning and the end.)

al-Shawwa's way of presenting the characteristic melodic movement for each maqam differs from that used by D'Erlanger, al-Hilu, and Mahfuz in two major respects. First, for a number of modes he describes the movement in terms of a series of notes, the notes being indicated by their Arabic/Persian names. This recalls the method followed by Mashaqah. For example, al-Shawwa writes for maqam Bayyati: "This maqam starts from [G] or [F] in order to ascend to the notes [A] and [Bb] and [c] to [d], then it returns to the note [F] repeatedly, and at the end the descent proceeds according to the structure of the scale of the maqam until the tonic; its tonic is the note [D]" (1946:59).

Second, he discusses the modes in terms of a smaller ambitus than D'Erlanger and al-Hilu present. al-Shawwa's modes generally extend over a range of only three rather than the four tetrachords found in the other two writers' works. [12]

Otherwise the points made regarding D'Erlanger's descriptions of melodic movement hold for al-Shawwa's work also: al-Shawwa generally describes the movement in terms of first ascending and then descending segments. Despite this, a majority of the modes do not start at the tonic. Most start in the region of their second or third ascending tetrachord. Some have straight ascend and descent; however, crooked or oblique ascents are common.

Sources for Middle-Period Descriptions of Melodic Movement

Since D'Erlanger's report in the 1932 Congress publication begins a new approach to recording the specific melodic character of each maqam, it is appropriate to seek the sources for this development. We have already discussed the possible sources for the reintroduction of the tetrachordal theory which plays such a large role in these presentations (see Chapter VI). When he indicates the sources for his documentation of the melodic and rhythmic modes, D'Erlanger singles out the "method" of Iskandar Shalfun and the "erudition" of `Ali Darwish (`Ali al-Darwish) (1949:xiv).

Iskandar Shalfun (d.1932), as we have seen, was editor of the monthly music journal Rawdat al-Balabil, published in Cairo from 1920 to 1927). He also established a school in

Cairo for teaching Arab music (see D'Erlanger 1949:378-380). From a passage in the Rawdat al-Balabil (1921:170), it seems clear that Shalfun did not believe in the idea that each mode has a specific path for its melodic unfolding: Shalfun first speaks against the idea of a specific starting note for each mode (see quote in Chapter X, Section I, above) and then speaks against other unnamed rules and principles which, he says, only bind or restrict the aesthetic potential of the music.

`Ali Darwish (1874-1952 [Kamil 1975:126]), on the other hand, a nāy player in a Sufi (Mevlevi) order in Aleppo, Syria, was in "possession of a vast repertoire of old compositions and the most rich collection of traditional melodic and rhythmic formulas ..." (D'Erlanger 1949:380). `Ali Darwish's erudition is clearly manifested when he provides D'Erlanger with a separate transcribed taqāsīm for for ninety-seven of the 119 modes that D'Erlanger discusses (1949:119ff.). Thus it seems that `Ali was the main, if not the sole, source for D'Erlanger's descriptions of the melodic movement specific to each of the maqamat. [13]

That `Ali Darwish was educated, at least in part, at a school of Turkish music in Istanbul raises the possibility that `Ali Darwish's and D'Erlanger's presentations of melodic movement reflect a Turkish perspective of this body of material. [14] It should be noted, for example, that the various patterns for the ordering of the tetrachords which are indicated in middle-period works recalls the three types of melodic direction that are conceptualized in modern Turkish theory. (The melodic movement of each Turkish mode is labeled as either ascending, descending, or ascending/descending; see Signell 1977:50ff.) The similarities between the conceptualization of melodic movement in Turkish and middle-period Arab theory is evidence of the strong historical connections between the Turkish and Arab music traditions in general, and more specifically of the strong links between Turkish and Arab musics in the late-nineteenth and early-twentieth centuries. (This point is discussed briefly in Chapter I.) While the distinction between Arab and Turkish musics is commonly recognized today, it seems likely that D'Erlanger and 'Ali Darwish did not perceive such a clear separation between the two traditions.

D'Erlanger adds that "... the authenticity of our documentation" is guaranteed because

> [e]ach of the modes ... has been studied by a special committee. Presided over by Raouf Yekta Bey, professor at the Conservatory of Istanbul and author of a study of Turkish music which appeared in the Encyclopedia of Lavignac, this committee was composed of the best musicians of Cairo including Mustapha Rida Bey, director of the Royal Institute of Arab Music. (1949:xiv)

This raises the possibility that Raouf Yekta and a number of Cairo musicians may have contributed to the descriptions of melodic movement contained in D'Erlanger's two works. Raouf

Yekta, for example, mentions the concept of specific paths (_seyir_) for the melodic unfolding of each Turkish mode in his Lavignac article (see note 28 below). Thus, the possibility that he influenced D'Erlanger's descriptions of the melodic movement cannot be dismissed.

The extent to which Raouf Yekta and "the best musicians of Cairo" critically studied and approved of the descriptions of melodic movement offered in D'Erlanger's two works is, howeever, an open question. In fact, there is no evidence to support this claim. The committee which D'Erlanger refers to was the 1932 Congress' Committee on Mode, Rhythm and Composition. In the minutes of committee's sessions included in the Congress publication it is clear that the committee did consider D'Erlanger's report; however, it does not seem that the desriptions of melodic movement included for each mode were ever critically analyzed, corrected, or amended by the committee members. We are nowhere told, for example, of any critical comments that the Cairo musicians might have offered concerning any of the particulars in D'Erlanger's report. There is no evidence that D'Erlanger or one of his aids came away from committee meetings with the Cairo musicians and subsequently edited any of the details. (D'Erlanger was sick and did not himself attend the Congress.) On the contrary, we are told in the minutes that the vast majority of modes in D'Erlanger's report were approved "without comment" (_Kitab Mu'tamar_ 1933:141ff.).

When comments by the committee members were recorded with respect to three of the maqamat (ibid.:142), the comments were concerned with whether a specific note was sharp or half-sharp and not with D'Erlanger's descriptions of melodic movement. [15] Thus, it seems that D'Erlanger's descriptions of melodic movement were based solely on the "erudition" of 'Ali Darwish.

As for the other middle-period writers who include descriptions of melodic movement (al-Shawwa, al-Hilu, and Mahfuz), these writers contain no statement of their sources. al-Hilu and Mahfuz's presentations are largely derivative of D'Erlanger's Arabic-language work. They do, however, differ from D'Erlanger on occasion with respect to specific details in the descriptions of melodic movement and thus can be seen as offering critical editions of D'Erlanger's presentations. al-Shawwa, a renowned master violinist, probably relied on his own understandings of the individual maqamat when he wrote his work in 1946. It is not clear whether these understandings were formulated during the first seventeen years of his life when he lived in Aleppo, Syria (1887-1904), or whether during the rest of musical career when he lived in Cairo.

Differences Among Middle-Period Descriptions of Melodic Movement

For the most part, the descriptions offered by the four main middle-period writers present a unified view of the modes' characteristic melodic movements. When the descriptions vary it is not entirely clear how we should understand these differences. Are they evidence of different personal interpretations or perhaps of different traditions concerning the interpretation of each mode. Such traditions might exist within one and the same city or might possibly represent regional variations (Cairo versus Beirut versus Damascus, for example). A specific description might also represent only the writer's personal understandings at that place and time; it is possible that the same writer might offer a slightly different progression at a later date. There are instances of differences, for example, between D'Erlanger's 1933 and 1949 works. [16]

Differences might include the following: 1) Which note to start with: D'Erlanger comments for maqam Nakriz (1933:255) that one can start with the notes C preceded by BB-b- or with the note c; i.e., you can start either with the tonic or the octave (he adds that the former is "more correct"). 2) Which tetrachord to start with: D'Erlanger (1933:253) says Nawa Athar should start with the second tetrachord but al-Hilu (1972:114) says it starts with the first tetrachord; similarly, D'Erlanger (1933:261) says maqam Hijaz Kar Kurd should start with the third tetrachord but Mahfuz (1964:312) says that it should start with two versions of the second tetrachord. 3) Whether or not a specific tetrachord is to be played: for maqam Rast, Mahfuz indicates that one should include "a certain amount of maqam Sikah on E-b-" (1964:320), but this maqam/tetrachord is not indicated by D'Erlanger, al-Hilu, or Mahfuz; similarly, for maqam Hijaz, D'Erlanger (1933:292) indicates that three different tetrachords can be played on d (Hijaz, Nahawand [Busalik], and Jaharkah); al-Hilu (1972:120-21) indicates only the Hijaz and Nahwand tetrachords; al-Shawwa mentions ony the Nahawand tetrachord; Mahfuz (1964:337) offers an entirely different understanding, indicating only a Bayyati tetrachord on d in this maqam. 4) Whether or not one should include notes below the tonic: for Nawa Athar, D'Erlanger indicates (1933:253) that one should show the leading tone, BB, before settling on the tonic C; al-Hilu writes (1972:114) that it is proper in this mode to descend to GG to play a Hijaz tetrachord on GG before settling on the tonic C. And 5) the overall ambitus: D'Erlanger and al-Hilu usually discuss the modes over a range of four ascending tetrachords while al-Shawwa and Mahfuz indicate a range of only three tetrachords above the tonic. These differences would each, to a greater or lesser degree, result in varying renditions of a given mode. They also raise the raise the question of the extent to which there really is a definitive version of the melodic movement of a maqam.

Concluding Comments about Middle-Period Descriptions

The descriptions of melodic movement found in middle-period sources are remarkable as a record of complex modal conceptualization. Although the maqamat are first analyzed in these works in structural terms (scale and tetrachords), we soon realize that these analyses present only the bare skeletons: one must also understand the dynamic aspects of each maqam, i.e., the characteristic path of the melodic movement.

Compared with early-period descriptions of melodic movement, three points stand out. First, the modes all have considerably larger ambitus in the middle period. Second, many modes are considerably more complex than those described in early-period works. For example, a number of modes are presented as having superimposed tetrachords in the middle period. Third, the descriptions, being in terms of tetrachords, are more general than the specific melodic lines of the early period. This last point has at least two repercussions: a) the descriptions of melodic movement are devoid of motivic documentation; there are, for example, no specific melodic phrases or melodic leaps indicated (melodic leaps were commonly in Mashaqah's melodic lines). And b) the descriptions are in general enough terms so that they are readily understandable to present-day musicians and music scholars (this is not the case with early period descriptions). [17]

Descriptions of Melodic Movement in the Present-Day Period

In the last of the three subperiods of modern Arab music theory, the present-day period, we find a new way of presenting the maqamat. Here description of melodic movement is usually totally omitted. Presentations of the maqamat are generally limited to structural analyses in terms of single-octave scales and two tetrachords (the jins al-aṣl and the jins al-far'). Each maqam is understood to have its own unique character (ṭab'), its own "color" (lawn; color in the sense of character/mood) (al-Hifni c.1946:138; Salah al-Din 1950:109, 134, etc.) but these seem to be based on structural features rather than on specifics of melody formation.

The "disappearance" of descriptions of melodic movement, so prominent in early- and middle-period works, raises a number of important questions: How did this change come about? What are the roots of this new approach to maqam analysis? Is it an entirely new development or is it perhaps a previously existing approach which recently came to the fore? Has this change affected or reflected changes in the performance practice? And finally, do present-day musicians conceptualize paths of melodic movement within a given maqam?; perhaps theorists have chosen to ignore a body of knowledge which is well known to large numbers of Arab musicians. There are few simple answers to these questions. The following pages consider some of these points, starting with evidence of the roots of this aspect of the present-day theory.

After fieldwork conducted in Egypt in 1798-1801, Villoteau did not report any evidence of the concept of a specific path for the melodic realization of each mode. Instead, Villoteau recorded only a scale for each mode, with the addition, in a few cases, of one or more "notes accidentelles" (1826:127-130). [18]

In his introductory comments, al-Shawwa presents a similar understanding of the level of melodic conceptualization among nineteenth- and early-twentieth-century musicians. Writing in 1946, he states that most Egyptian composers and instrumentalists over the last 120 to 130 years have been unfamiliar with the idea that each maqam has a specific path for its melodic exposition:

> Most of the composers and instrumentalists have been concerned only with knowing the degrees of each mode and have not taken an interest in knowing its shurūt [his term for the rules/ conditions for each mode's melodic features] ... and the principles of the movement [uṣūl al-sayr] in it at the time of composing songs or instrumental playing. (1946:4)

While neither of these sources offer conclusive proof of this point, it seems that if it were indeed the case that the modes were not conceived as having characteristic patterns of melody formation, then we might expect to find indigenous theoretical writings which present ust such an understanding. In the works of al-Khula'i (1904) and Dhakir (1903) we find two such sources. In these works, both by Egyptian writers, we find the modes, with but few exceptions, presented simply as scalar phenomena. Additional comments which indicate specific starting notes for each mode in Turkish practice (discussed above in Chapter X, Section I) serve to amplify the fact that specific aspects of melody formation were not conceptualized in Arab (or perhaps only Egyptian) practice. For maqam Rast, for example, al-Khula'i writes,

> Rast-Dukah-Sikah-Jaharkah-Nawa-Husayni-Awj-Kirdan [i.e., C D E-b- F G A B-b- c]. When it is necessary to ascend beyond or descent below these notes, [this] modal complex [ṭarīqah] uses the higher and lower octaves of these same notes. The settling at the end is on the note Rast [C]. In terms of Turkish practice, [this] modal complex starts from Rast [C]. (1904:41)

In the twentieth century the question of whether each mode has specific approaches to melody formation becomes a somewhat popular issue, for it is addressed in a number of theoretical works. The first of our sources to discuss this issue is Iskandar Shalfun in his journal, Rawdat al-Balabil. After speaking against the idea of a specific starting note for each maqam (quoted above in Section I) Shalfun writes,

> Music is one of the aesthetic arts and a divine language from among the sentimental languages. Thus, rigid, restricting, and confining rules and laws do not suffice in it. Rather, there are other rules and laws, these being those which sweetness and delicacy have established and which beauty and proper taste have determined. It is necessary to reject every rule which tends to lessen the extent of the sweetness of the

> music. And it is necessary to smash and break every law which tends to replace the beauty of the music and its delicateness with rigidity and severity. (1921:170)

While exceedingly poetic and nonspecific, this passage is important as the first of a large number of comments directed against preconceived ideas which govern the melodic rendition of a maqam.

It was undoubtably in response to the above sentiments (expressed by Shalfun and other liked-minded musicians/ scholars) that the 1932 Congress' Committee on Mode, Rhythm, and Composition was asked to respond to the following question: "The technique of the maqamat hampers the fantasy of the composer; would it be possible to give more freedom to the latter; would it be necessary to modify certain modal rules or, moreover, to change them all?" (Recueil 1934:82). After commenting on the necessity of considering the dominant/ghammāz at the beginning of the melody (rather than starting on a specific starting note; see quote on p. 544 above), the Congress committee responded:

> The members are of the opinion that the traditional technique of the maqamat does not hinder the fantasy of the composer. There is no reason to modify or change the modal rules since the reason for the existence of these same rules is intimately tied to the melodic necessitites of the constitution and of the way of treating the maqamat. It is necessary when all is said and done to end with the tonic of the mode employed. (Recueil 1934:134-35)

Unfortunately, the committee members do not explain what they had in mind when they mention "modal rules," "melodic necessitites," and "the way of treating the maqamat." It is clear, however, that the committee members felt each maqam to dictate at least two points concerning melody formation: a piece must start by taking into consideration the dominant/ ghammāz and must end on the tonic. Their answer leaves unclear the matter of whether each maqam has a characteristic path for its melodic unfolding beyond these two points.

In the (Cairo) Institute of Oriental Music's report in the same 1932 Congress publication we find further evidence of the absence of conceptualization about melodic features at the beginning of the twentieth century. Here the scalar and tetrachordal structures of fifty-two maqamat are presented but no additional information is offerred concerning aspects of melody formation. Rather, there is a footnote in the report's title page (Recueil 1934:529) stating that one can refer to D'Erlanger's presentation in the same publication "for knowledge of the specific character [shakhṣiyyah] of these maqamat and the explanation of their melodic movement." [19] It is not stated why the Institute chose not to address the aspect of melodic movement. While this footnote implies that the members of the Institute might have given their approval to having D'Erlanger speak for them on this matter, it is likely that this was not the case. Rather, we might see in the Institute's report further evidence that many theorists and musicians (even during the middle period) did not conceptualize explicitly about the melodic characteristics of each mode.

In subsequent works, especially those written during the formative years of the present-day period, writers mention three factors which can be seen as contributing to the near universal adoption of a music theory devoid of melodic description. The first involves the founding of schools/ institutes for Arab music and the introduction of Arab music studies into the general public school curriculum. Theorists, most of whom were now teachers in these institutionalized setting, began to orient their theories to a new audience, i.e., young students (see, for example, al-Hifni c.1946; 1st ed. 1938). Simplification and systematization became important goals. A new theory emerged in which the maqamat are defined solely in structural terms (single-octave scales composed of only two tetrachords). Descriptions of melodic movement are entirely absent in all but a few exceptional cases.

A second factor mentioned in the literature which can be seen as contributing to the absence of melodic description is the belief that specific preconceived paths for the melodic movement of each mode serve only to "shackle" or "restrict" the freedom of the composer. This idea was expressed in the Shalfun article and the 1932 Congress's question to its Committee on Mode, Rhythm, and Composition, both quoted above. I include two additional statements here because they refer so directly to the type of modal conceptualization we are discussing in this section (see also al-Hilu 1972:74 n.1 and 94 n.1).

Like his fellow members of the present-day school, al-Sabbagh, of Damascus, voices his concern that too many complexities will confuse the minds of the students of Arab music. This brings him to consider the large number of maqamat, many of which he considers unnecessary. Among the ways that people come up with so many modes is by giving separate names to different melodic renditions of the same scale. He cites the example of maqam Rast and maqam Mahur: the former is said to move from the tonic to the octave while the latter moves from the octave to the tonic. This brings him to comment,

> Moreover, they impose a special order to the movement in every mode which restricts the freedom of the composer. They declare that it is necessary to start the mode from such and such a note and [then] turn to another note which they name, then to show such and such a mode and to modulate [yataḥawwal] to another mode; then it is necessary to descend to the tonic and ascend after that to the octave and finally to settle/cadence in the [original] mode. As I have said, there is no benefit from all this except restricting the freedom of the composer and his imagination. I believe that the composer has complete freedom to begin from any note and to create as he wants ... (1950:35)

Qasis, writing from the Nile Delta region in Egypt, offers a similar statement:

> ... forcing the composer to start from a specific note or a specific tetrachord or singling out for the performance a specific procedure [results in] a shackling of [the composer's] freedom to compose ... (n.d.:193)

Qasis concludes, "it is not compatable with ... the musician's freedom to choose the suitable way for expressing his sentiment and his feelings" (ibid.). [20]

This thought is also expressed by contemporary music teachers/theorists in Cairo. For example, when asked to comment on a specific middle-period description of melodic movement in maqam Rast, Surur commented, "This is wrong because there is no one way; it is too restrictive. One can play maqam Rast in hundreds of different ways" (personal communication 6/87). According to Surur, a description of melodic movement can only be given with respect to a specific piece of music, but not with respect to a specific mode.

A third factor contributing to the absence of melodic description is the belief, held by some, that Arab music and Arab music theory must follow Western models of scientific and systematic reasoning. al-Sabbagh, for example, notes that Western musicians treat their two modes (major and minor) in any number of ways without inventing new names for each particular treatment:

> In their compositions Europeans use extraordinary and widespread diversity and although they frequently change the pitch level [tabaqah] of the mode and introduce sharp and flat accidentals not found in the fundamental structure of the

> mode, nevertheless, we do not hear that they devise names for these trifling ways of acting. [Rather,] there are but two names for two modes only and these are major and minor. (1950:35)

Thus it is not only the requirements of pedagogy and the freedom of the composer but also the model found in Western music theory and practice that has influenced al-Sabbagh in his stance against defining specific melodic features for each mode.

Use of a Western model is also indicated in the publication of the second halqah, an extended conference held in Cairo from 1961 to 1963. The halqah acknowledges that it seeks to reorganize the rules of theory and practice upon which Arab music in Egypt is based "seeking help in this from what the West has brought to the foundation of Western music..." (al-Halqah 1964:7). Thus, it is significant that the halqah omits all description of melodic movement in its publication (although there is not statement explicitly crediting Western influence as the source for this stance).

In addition to the above factors which are recognized by one or more Arab writers, we add three more points not explicitly mentioned in the literature. First, Arab music has not been linked to a standardizing repertoire, i.e., to a body of pieces which could function to preserve a specific understanding of the melodic characteristics unique to each mode. This situation is contrasted with that found in Turkish music where a large body of traditional instrumental and vocal pieces serve to preserve specific approaches to melody formation unique to each mode.

Second, there is no common tradition of music apprenticeship whereby this body of knowledge might be passed systematically from one generation to another. Traditionally, Arab musicians have apparently learned the intricacies of their profession by a process of osmosis rather than by undertaking lengthy training under a master musician (as, for example, has been the case in Indian music where one becomes a long-term disciple of a guru̅ or an ustâd).

When these two points are coupled with the attitude that the composer has complete freedom to "express his feelings and sentiments," then the music culture has no sure way of preserving specific approaches to melody formation unique to each maqam. New pieces which appear over the years would not necessarily follow what might, in previous generations, have been viewed as the characteristic pattern of a given mode's melodic movement. Over time this situation has resulted in a body of pieces which do not provide a uniform view of how one should proceed when moving through a given maqam. Under such circumstances, the student of Arab music, who commonly learns about a given mode by playing pieces set in that mode, would not learn any one approach to melody formation when studying a number of pieces in the same mode. [21]

This situation is further exacerbated by a third point, namely, a tendency among musicians to ignore distinctions between modes which share the same (or similar) scales but differ in their characteristic paths of melodic movement. For example, it is common today to refer to pieces in maqam Rast--which should theoretically proceed in an ascending progression--and others in maqam Kirdan--which use the same notes but should theoretically proceed in a descending progression--as if they were all in maqam Rast (this practice is noted in Surur 1986:125 and elsewhere). Note the muwashshah, "Yā Shādī al-Alḥān" (Fatah Allah and Kamil 1982:136), which is commonly said to be in maqam Rast despite the fact that it begins in the octave and follows a descending progression. When a student learns this song as an example of maqam Rast along with another Rast composition which follows an ascending progression, he will come to understand the mode devoid of any restrictions regarding characteristic melodic movement. The same blurring of distinctions based on specifics of melody formation occurs with the modes 'Ushaq Turki, Bayyati, and Muhayyar. Theoretically, 'Ushaq Turki was said to start at the tonic and ascend; Bayyati starts around the fourth; Muhayyar starts in the octave and descends (see Mashaqah [c.1840] 1899:883, 884, and 889). Today, pieces in all three modes are said to be in maqam Bayyati.

The blurring of these distinctions is not a new phenomenon. Writing in c.1840, for example, Mashaqah complains that musicians of his day do not distinguish between a number of similar modes. He even mentions the `Ushaq Turki/Bayyati example, saying that the Syrian cognizanti do not distinguish between these two modes (1899:883; 1913:92). When mentioning a similar blurring among Egyptian musicians, Mashaqah is harsh in his criticism (see quote on p.356above).

While the tendency to ignore distinctions among maqamat has apparently existed throughout the modern period, it seems to have grown in recent years. Note, for example, the suggestion by members of the second halqah to limit the number of maqam names to eleven, i.e., to refer to all the modes only by the name of their fasīlah's parent mode (al-Halqah 1964:14; this is discussed in Chapter VIII, above).

Minimally, then, there seem to be two ways to view the present-day period's rejection of specific patterns of melody formation for each mode (see the discussion of "the exceptions" below for a third way of viewing this matter): first, it might represent a near-universal adoption of what had been a long-held understanding among a segment of the musician/theorist population; or second, it might be an idea of rather recent origin; say, sometime in the late-nineteenth century. We have already discussed evidence which suggests that there always were some musicians and theorists who did not conceptualize about melody formation when they defined the various maqamat (Villoteau, Dhakir, ak-Khula'i, the Royal

Institute at the 1932 Congress, etc.). At the same time, however, there were other musicians/ theorists who held that each mode does indeed have a unique approach to melody formation (the early- and middle-period writers, for example). We might, then, hypothesize that there have always been two schools, i.e., those that did and those that did not believe in specific paths of melody formation. The relative popularity of these two schools probably differed in different geographical regions and might well have shifted not only between subperiods but also within each of the three subperiods. We might benefit by imagining a "GS line," i.e., a continuum, one end of which represents a complete absence of conceptualization of melodic movement, the other end representing a situation where all members of the music community conceptualize specific patterns of melodic formation for each mode. From the available evidence, it seems that Egyptian musicians/theorists have stood closest to the "non-conceptualizing" end (note the testimonies of Villoteau, al-Shawwa, Dhakir, al-Khula'i, and the Royal Institute, all quoted above). Syrian musicians/theorists seem to have stood closer to the "conceptualizing" end. (Note the works by Mashaqah, D'Erlanger, whose main informant was the Syrian, 'Ali Darwish, and Mahfuz. al-Sabbagh, however, stands with the Egyptians by not recognizing specifics of melody formation.) Meanwhile, it is the Turks who have stood closest to the "conceptualizing" end of our continuum. With their three types of melodic progressions and the concept of *seyir* (see note 28, below), the Turks continue to explicitly incorporate aspects of melodic conceptualization into their music theory.

al-Hilu (1972:72ff.) mentions a group of modern-day "systemists" (*niẓāmiyyīn*), strong believers in the idea that each maqam has a specific pattern of melody formation, who implicitly recognize two schools when they refer to educated versus uneducated (*ghayr muta`allimīn*) musicians. These theorists complain that uneducated musicians do not maintain distinctions among similar maqamat which are based on elements of "melodic style" (*uslūb laḥnī*) and the appropriate "course of the performance" (*sayr al-`amal*). For example, they do not maintain the distinction between the maqams `Ajam and `Ajam `Ushayran: the "systematists" hold that these two modes share the same notes but differ in that movement in the former ends on Bb while movement in the latter ends on BBb (ibid.:73). The uneducated also do not maintain distinctions among modes which have the same scalar structure but which are based on different tonic notes (i.e., modal transpositions): these modes should differ in terms of the specifics of melody formation (*sayr al-`amal*). The modes Kurd (based on D) and Hijaz Kar Kurd (on C) are such an example. Maqam Kurd should start from D to G with its root tetrachord, i.e., Kurd on D; Hijaz Kar Kurd should start in the octave region with the notes Bb to c (ibid.:74).

The distinction between educated and uneducated might well explain the existence of our two schools but it raises the question, "What is the education process by which one learns this body of knowledge?" Based on my fieldwork in Cairo, it is clear that students at the Cairo music institutes are not taught specifics of melody formation. Where, then, does one receive such an education? Surely, there are a large body of pieces in the Arab repertoire (muwashshaḥāt, samā`iyyāt, etc.) which one could, with proper care, isolate as examples of the characteristic patterns of melodic movement specific to each maqam. One might also learn about the specifics of melody formation by reading middle-period sources. However, all available evidence suggests that very few theorists or musicians read these sources. And finally, in view of `Ali Darwish's example, it is possible that many musicians have learned this body of knowledge from either direct or indirect contact with Turkish music practice. (Having studied in Istanbul, `Ali Darwish and others undoubtedly passed what they had learned on to their students in Syria and Egypt.) Centers of the Turkish-based Mevlevi (Sufi) order which were found throughout the Arab world might also have served to spread a Turkish music perspective and even a Turkish repertoire.

If we assume, on the other hand, that the lack of conceptualization about specifics of melody formation is a somewhat recent phenomenon, one centered predominantly in the present-day period, then the two schools might be described as old/conservative versus new/modern. al-Hilu seems to support this understanding when he speaks of a "modern musical renaissance" which "set the composer free to ... start from any note he wants ..." (1972:94 n.1). Qasis (n.d.:193) also refers to "recent artistic development[s]" although his meaning is not clear. This understanding coincides with the idea that an "academic" period of Cairo-based performance practice came to a close by c.1930 (see Chapter I).

The Exceptions in Present-Day Theoretical Presentations: Modes for Which Comments Regarding Melodic Movement Are Included

As we have seen, present-day writers commonly define the maqamat in terms of single-octave scales and two tetrachords, omitting any mention of melodic characteristics in all but a few exceptional cases. The existence of these few exceptions raises a number of important questions concerning the extent to which patterns of melody formation are in fact conceptualized for all maqamat. Perhaps, there is more to the issue than is being explicitly discussed in the literature. We offer two examples from al-Khula'i (1904), one of the earliest sources to adopt an "absent-in-all-but-a-few-cases" approach to melodic description. al-Khula'i includes two modes which are said to share the same scale and final note as maqam Rast: Maqam Kirdan "resembles the structure of Rast exactly except that it differs from it in that the beginning of the composition in [Kirdan] is from the highest [notes] to the lowest" (ibid.:42). A second maqam, called only "another form of Rast" is defined as "C D E-b- F G, then you return to C and touch GG and the stop on C" (ibid.:41; this is undoubtedly the mode as Mashaqah defined it). Kirdan seems to have a descending melodic progression while the "other" Rast seems to have a restricted ambitus. The implication is that the "regular" maqam Rast has some melodic progression which differentiates it from these other two modes--one which, perhaps, is ascending rather than descending and one which, as al-Khula`i's comments suggest, ascends at least to the octave and possibly beyond. If maqam Rast does indeed have a characteristic melodic progression, then why is it not explicitly stated. It is possible that the progression one follows in maqam Rast is the same as (or at least similar to) the progression one follows for all but a few exceptional modes and, thus, it was felt that only the exceptional cases need be explained. Perhaps, then, there has always been an underlying principle which guides the path of the melody in all the modes but that it is consciously recognized in only a few instances.

The most obvious instances where explicit melodic conceptualization would be necessary are in those cases where two or more modes share the same scalar structure, for here the specifics of melody formation would play the main role in differentiating among otherwise identical maqamat. It is not surprising, then, that it is just such "identical scale" modes which account for the majority of the explicit comments regarding melodic movement in the present-day period. Kirdan and/or Mahur is differentiated from Rast (Salah al-Din 1950:106; al-Sabbagh 1950:42 and 48; Muhammad 1984:37; etc.); Muhayyar and occasionally `Ushaq Turki are differentiated from Bayyati or Husayni (Salah al-Din 1950:136; al-Sabbagh 1950:48; Surur 1986:133; etc.); more rarely, maqam Bayyati `Araban is differentiated from maqam Shuri (also called Qarjighar) (al-Sabbagh 1950:48; Kamil 1975:63). [22]

The need to describe patterns of melodic movement for "identical scale" modes has been minimalized by a tendency among present-day theorists to recognize only one mode per scale. Thus, while Salah al-Din (1950) identifies at least nine of the ninety-two modes he discusses as sharing the same scale with another mode, Muhammad (1984:37) recognizes only two "identical scale" modes (Rast and Kirdan) among the seventy-two she discusses. [23] In a modal system based on one mode per scale, there is no need to conceptualize about patterns of melodic movement as far as the task of differentiating among the various modes is concerned; a structural analysis in terms of scale is sufficient.

The exceptional comments included in the present-day literature seem to suggest that characteristic patterns of melody formation exist for all or most maqamat in performance but that they are not of concern to the theorist except in the few instances where two or more modes share the same scale. The lack of consistency with which the maqamat are described has led Elsner (1973:30) to cite "methodological weaknesses" in the way theorists have dealt with the maqamat. (As an example Elsner mentions al-Khula'i's repetition of Mashaqah's lines regarding the four-fold division of maqam-types. Mashaqah says that modes which share the same scale will differ in how they are executed at the time of performance. When describing the individual modes in subsequent pages, however, al-Khula'i does not even attempt to explain any specifics of execution.) The most explicit statement acknowledging methodological weaknesses comes from from Mashaqah himself within the same passage. He states that modes which share the same notes will differ, in part, in

> ... the manner of performance (ijrā' al-'amal) in the movement from one note to another ... [but that] the expression of [this aspect] is not possible with words [for] among the Arabs there is no convention of [using] symbols for this such as the dots and the procedures like the convention[s] of the Europeans and the Greeks with which they make clear these distinctions. (1899:301; 1913:77)

This was written prior to the introduction of Western notation. It is somewhat ironic that it is Mashaqah who expresses this idea since he later succeeds to a large extent in differentiating among similar modes with the specific melodic lines he gives for each. Acknowledgement of "methodological weaknesses" is, however, fully appropriate for al-Khula`i who fails to describe melodic movement for the majority of the modes he discusses.

Methodological weaknesses are especially apparent in the publication of the second Cairo halqah in which the modes are reduced to single-octave structures composed of only two tetrachords. While the majority of the modes discussed are mutually distinguishable on the basis of this minimal description, a number of structurally similar modes are mentioned without any attempt to inform the reader how these modes differ from one another. For example, there is no explanation of the elements which differentiate maqam Rast from maqam Kirdan or Bayyati from `Ushaq Turki. The same is true for the modes Husayni, Muhayyar, Tahir, `Ardibar, and Husayni Kul`izar, and for Sha`ar and Musta`ar (al-Halqah 1964:22). The reader is left unable to distinguish among these identical-scale modes.

Concepts re. Predetermined Contour among Present-Day Musicians and Theorists

In view of the absence, in present-day theoretical works, of statements about characteristic patterns of melodic development specific to each maqam, the question arises, "Is this level of conceptualization also absent among contemporary musicians and theorists?" This section presents findings from a limited study of this issue conducted in

Cairo in 1982-83, 1984, and 1987.

Foremost, I found that specifics of melodic movement within a given maqam is rarely conceptualized on an explicit level. This body of knowledge is not, for example, taught either at the city's various music institutes (in performance or theory classes) or in private music lessons conducted in private homes. From extended series of interviews and music lessons, however, it was possible to ascertain some commonly held ideas about patterns of melodic development. At the basis of these ideas is a conceptual division of performance genres into two groups. Ideas about melodic development are then linked to one or the other of these two groups rather than to any specific maqam. The first group contains precomposed vocal and instrumental pieces; the second contains the improvisatory genres, the instrumental *taqāsīm* and the vocal *layālī* and *mawwāl*. [24]

It is commonly held that composers (i.e., those who create the pieces which comprise the first of the two groups) have complete freedom to follow any path at all when composing in a given maqam. They can, for example, start at the tonic, at the octave, or anywhere else they choose.

A different understanding reigns for the improvisatory genres where it is commonly believed that the performer must follow an ascending progression, no matter which maqam he or she is performing. Samha el-Kholy (al-Khuli), for example, writes about *taqāsīm*:

> The first stage ... exploit[s] the first (lower) tetrachord of the basic scale of the mode, with frequent references to a tetrachord of its lower octave... In the next stage, ... the main scale of the mode is treated in an upward sweep, ... using the higher tetrachord of that scale... [Then] the music ascends gradually upwards to embrace another tetrachord, or two, of the higher octave of the mode... [Then] comes the ... journey downwards ... (1978:18-20)

Similarly, during a series of ʿud lessons, George Michel taught, "You ascend [up the scale] little by little and come down little by little; this is [the structure] for any taqasim" (personal communication 10/5 and 10/13, 1982). During nay and theory lessons, Qadri Surur taught that while there is no specific prescribed starting notes "taqāsīm must start around the tonic in order to set the mood of the maqam" (ʿashān tasalṭan al-maqām). After this initial statement, taqāsīm should all follow an ascending progression (personal communication 6/1 and 6/22, 1987). And finally, in a series of theory lessons, ʿAbdullah al-Kurdi taught that "taqāsīm must all start at the bottom and proceed up; this is true in all maqamat" (personal communication 6/26/87). [25] Beyond such statements of overall contour, musicians and theorists in Cairo do not seem to conceptualize characteristic patterns of melodic movement specific to each maqam.

The present-day understanding that all maqamat should follow ascending progressions in taqāsīm, layālī, and mawwal performance stands in obvious contrast to the descriptions of melodic movement found in early- and middle-period works. In the latter, a majority of maqamat are presented as not following simple ascending progressions. Many, in fact, follow descending rather than ascending progressions (see above, this chapter). When asked about "descending" maqamat, most of my informants asserted that there are no descending modes. This was confirmed in discussions about specific modes that were previously understood to follow descending progressions. About maqam Muhayyar, for example, Surur (ibid.), al-Kurdi (ibid.), and Mansi Amin (an *ʿūd* teacher; personal communication 6/13/87) all acknowledge that this mode requires greatest emphasis on the octave region; however, they all state that *taqâsīm* in this mode "must start at the beginning," i.e., with a Bayyati tetrachord on D (rather than on d as is indicated in D'Erlanger 1933:269, for example). In other words, maqam Muhayyar must follow an ascending progression, but, having ascended to the octave region, one should spend the most time there. As for maqam Hijaz Kar, about which D'Erlanger wrote, "the beginning of this mode must be from the octave and not from the tonic region" (1933:259), it too is now understood to follow an ascending progression, starting with the tonic area. For most of my informants, there is no such thing as modes which follow descending progressions. [26]

Another point of divergence with middle-period conceptualization concerns those modes for which middle-period writers indicate the use of a tetrachord below the tonic. D'Erlanger, for example, states that maqam Rast is characterized by a descent to such a tetrachord both at the beginning and at the end of its melodic unfolding (1933:227). In contrast, maqam Bayyati does not include such a tetrachord (ibid.:265). Among my informants this type of distinction does not exist. According to one individual, this lower range is equally available in both Rast and Bayyati but is not needed in either case. If, however, one is asked to play a long taqāsīm in either maqam then one would probably want to make use of this lower tetrachord for the sake of the extended range that if offers (personal communication 6/1/87).

The change from a) the detailed and multifarious approaches to melodic development that existed in early- and middle-period theory, to b) the simple ascending and otherwise unspecified conceptualization of the present day, was aided by the introduction of a number new theoretical concepts over the last c.100 years. Most important was the concept of scale--especially the single-octave scale--as applied to the various modes. (The concept of scale was not applied to the various modes in the early period; the maqamat were more melody-types than scale-types.) A second change was the shift from the concept of finalis (qarār) to the Western concept of tonic (asās). According to early- and middle- period theories, this note occurred only in the final cadence in many modes. Today this same note is understood to be the most important note in all maqamat; it is the note around which all "free standing" improvisatory performances are said to begin. Accompanying these developments was a new perception that the lowest tetrachord of a mode's central octave is also the mode's fundamental or root tetrachord (the jins al-aṣl). With this perception came the idea that this tetrachord should be the first and last to be played in the performance of a maqam (see, for example, al-Hilu 1972:92 where this view of the jins al-aṣl is given). Again, this was not the case for a majority of the maqamat in the early- and middle-period theories.

Terms for Discussing Characteristic Melodic Progressions

There is no universally recognized term for referring to a mode's characteristic melodic progression. When discussing this idea, theorists use a number of different words and phrases, at the heart of which is an implicit recognition of the distinction between the statically viewed structural aspects of a mode (e.g., the scale and constituent tetrachords) and the dynamic aspect of melody formation. Among the words which theorists have used to refer to the latter, the most prominent throughout the modern period has been al-'amal, literally, the work, the doing, the practice, the performance, the execution. Mashaqah, for example, comments that modes which share the same notes and tonic will differ in their ijrā' al-'amal, i.e., roughly, "the execution of the performance" ([c.1840] 1899:301, etc.). al-Hilu uses the same phrase to introduce his descriptions of each's modes characteristic melodic movement (1961:94ff.). Salah al-Din (1950:136, etc.; see note 22) and many present-day Cairo theorists use the phrase ṭarīqat al-'amal, roughly, "the manner/method of the performance," to refer to this dynamic aspect of the maqamat. al-Hilu (1961:73, 74) also uses sayr al-'amal, roughly, "the course/path of the performance," for this purpose. D'Erlanger (1933:183ff.) uses simply al-'amal (see passage quoted on p.503 above). [27]

Three of the words found in the above phrases are also used on their own to refer to the dynamic aspect of melody formation: al-ijrā', i.e., "the execution, performance," al-sayr, i.e., "the movement, progress, procedure, behavior," and al-ṭarīqah, i.e., "the manner, method, procedure". Mashaqah, for example, comments that modes with identical scales differ "in al-ijrā' only" (1899:726, 929, etc). Similarly, al-Shawwa writes about maqam 'Ushaq (1946:60), "This maqam, the construction of its [scalar] degrees does not differ from the degrees of the scale of maqam Bayyati; however, the difference is in the sayr" (see also p.82, 84, and 85). al-Hilu uses a number of these words together when he writes that "each [mode] has its own special manner/procedure [ṭarīqah] during the course of a performance [sayr al-'amal] and during its execution [ijrā']" (li-kull *[maqām] ṭarīqatuhu al-khāṣṣah ‘ind sayr al-‘amal wa ijrā'ihi*) (1972:73).

Other words which are used for the same general purpose must be considered idiosyncratic. al-Shawwa, for example, refers to the specifics of each maqam's characteristic melodic progression as the maqam's *shurūt*, i.e., its conditions, its stipulated or obligatory features/provisions. In his introductory comments, al-Shawwa remarks that full knowledge of a maqam includes "knowing its *shurūt*, the analysis of its intervals, and the principles/basic rules of the movement [*sayr*] in it at the time of composing songs or instrumental playing" (1946:4).

In the 1932 Congress publication (*Recueil* 1934:188ff. and 529), D'Erlanger's presentations of the melodic movement of each maqam are introduced with the words *bayān ṭawr-ha*, i.e., "an explanation of [the maqam's] state/condition/ development." D'Erlanger also offers the phrase "*ṭawr an-naghmah*" which he translates as "the process of the melodic movement" (1949:100). The use of the word *ṭawr* (state, condition, development) in this context is not, however, found in any of the other Arabic sources used for the present study. al-Hilu also uses the phrase *uslūb laḥnī*, i.e., "the melodic style" to refer to this aspect of the various modes (see p.692 above; see also al-Faruqi 1974:100). While all the words mentioned in these paragraphs are understood when used in the appropriate context, none carry the weight of being a widely accepted theoretical term. [28]

In conclusion, the idea that each maqam has a specific path for its melodic unfolding existed as early as the fifteenth century. Changes in the form and the extent of such conceptualization throughout the modern period represents one of the most profound changes that has occurred in modern Arab music theory. The shift from 1) melody-types, to 2) complex scales accompanied by detailed description of melodic movement in terms of tetrachords, to 3) single-octave scales devoid of any mention of melodic characteristics has occurred hand in hand with the adoption of a number of "new" theoretical concepts (scale, tetrachord, tonic, Western staff notation and Western solfege, etc.). Despite the fact that present-day theoretical works omit references to patterns of melodic development, there is evidence that the present day is dominated by an understanding that all modes follow a simple ascending (and then descending) progression in the improvisatory genres (*taqāsīm*, *layālī*, and *mawwāl*). This represents a major simplification of the complex schemes of melodic development found in early- and middle-period works.

NOTES FOR CHAPTER X, SECTION J

1. Laborde's treatment of this material is remarkably clear and coherent. However, considering that he was writing in 1780 and that he was not an Arab specialist, a new study of this material is undoubtedly in order.

Shams al-Din refers to the notes only as Yak, Du, Si, Char, Banj, Shash, and Haft, i.e., one, two three, four, etc. Based on evidence in both earlier and later works we will assume that Hijaz used the notes D E-b- F# G ... in Shams al-Din's time. See, for example, Wright (1978:51 and 128ff.) for a discussion of Hijaz in the thirteenth century and Mashaqah ([c.1840] 1913:97) for this understanding of the notes in maqam Hijaz in early nineteenth-century practice.

2. Farmer (1936:753) comments that this "use of a stave for the purpose of musical notation ... may be traced to the year 1200 at least"; he does not, however, explain his dating of this phenomenon.

3. In these cases Mashaqah is objecting to a number of modes that require the use of one or more non-fundamental scale degrees, a feature which Mashaqah feels is best avoided by transposing the mode to a position that would require no (or fewer) non-fundamental degrees. For example, a mode which uses the notes C D E F=/= (where the E and F=/= are non-fundamental notes) could be presented as F G A B-b- if it were transposed up a fourth. In this transposition the notes are all degrees of the fundamental scale.

4. A few of the descriptions in al-Shawwa's 1946 work do resemble Mashaqah's melodic lines in format (see below). Also, Antoni (1925) includes many of Mashaqah's melody lines adapted to Western notation.

5. It is possible to argue both for and against such an ascent in Mashaqah's time. Evidence supporting an ascent to the octave include Cantemir's description of Rast in Turkish practice (1700). Cantemir describes Rast as centered in the region immediately on either side of the note Rast [C] but adds that one can ascend up to the note a, i.e., tiz or jawāb Husayni (Walter Feldman, personal communication 6/88). Hashim Bey, also describing Turkish practice, includes an ascent up to the note Muhayyar [d] in this maqam (1862; quoted in Fatah Allah 1971:108). It is possible that Mashaqah meant to give only the minimum statement needed to evoke the mode, and that further ascent was allowed; perhaps, for example, Mashaqah's line could be repeated at the octave.

The testimony of the Turkish tanbūr (long neck lute) player, Necdet Yasar (personal communication 2/23/88), however, supports the idea that ascent to the tonic might not have been considered characteristic of maqam Rast. Yasar states that one can ascend to the octave in maqam Rast but that one must not linger there: you must ascend quickly and then immediately return to the lower region. You can not emphasize the octave region. This is because this region, he says, is considered the domain of another closely related maqam, Mahur. Perhaps the present-day practice of ascending to the octave (found in virtually all modes) is a somewhat recently acquired aesthetic, one which gained prominence along with the recent application of the concepts of octave scales and the Western sense of tonic and octave.

Whatever the practice might have been in Mashaqah's time, the minimal ambitus in Mashaqah's description of maqam Rast clearly presented a problem for later writers. For example, Antoni (1925) bases his descriptions of the maqamat on Mashaqah's work, transcribing Mashaqah's melodic lines onto staff notation. When it comes to maqam Rast, however, Antoni rejects Mashaqah's line, giving one of his own which ascends up to the octave (C D E-b- F G A B-b- c F E D C D C)(p.5; see also al-Khula'i 1904:41).

6. This is indeed the case in present-day practice: Leaps from C to E-b- and from E-b- to G are somewhat common in maqam Sikah. The notes D and F are not, however, entirely omitted. On the contrary, they play important roles in the development of this maqam. Melodic leaps are common in a number of maqamat in present- day practice. While these leaps are often a characteristic feature of the maqamat in which they occur, there is no tradition in either the middle-period and present-day theory for recognizing temporary melodic leaps as characteristic elements of any maqam.

7. The naming of the various tetrachords is commonly preceded by a statement identifying specific startings notes for each maqam and occasionally end with a statement indicating the characteristic use of one or more notes below the tonic immediately prior to the final cadence on the tonic. Starting notes and notes below the tonic are discussed in Sections I and G, above.

8. The Jaharkah tetrachord on d mentioned in this 1933 Arabic work is omitted in D'Erlanger's later work (1949:278).

9. D'Erlanger proposed 95 modes in all but three were rejected by members of the Congress (see Kitab Mu'tamar 1933:278 and 321).

10. The figure of 101 modes excludes nineteen modes for which only perfunctory comments are given. These are the Busalik and Kurd compound modes (see D'Erlanger 1949:294-295 and 298ff.). It also includes one maqam, Nahawand Sinbulah, which is described in D'Erlanger's 1933 work but not in the 1949 work.

11. We will see in the following pages that writers of the present-day period commonly present only the structural analysis of each maqam, omitting any description of characteristic melodic movement. This has left the "simple ascending" presentation uncontradicted, untempered by any descriptions of more complex patterns of progression that might occur in practice. Interviews conducted in Cairo reveal that musicians, taught only this one view of the modes, have come to perceive all modes as containing simple ascending progressions. An idea born in the realm of music theory has come to affect the way musicians perform the modes. Part of the "blame" for this development must be placed on D'Erlanger and other middle- period writers who propagated the idea of simple ascending structural analyses.

12. Another point of difference between al-Shawwa's descriptions of melodic movement and those of D'Erlanger, al-Hilu, and Mahfuz is that while al-Shawwa often couches his descriptions in terms of tonal groups, indicating the order in which the various tonal groups should appear, he does not refer to these groups as tetrachords. Rather, he says that one should play either "maqam" so and so, or "nagham" so and so (see 1946:87,88), or else he simply names the entity without referring to it as maqam, nagham, or tetrachord; for example, "then [the mode] uses Hijaz on the note [G] and then Nahawand on the note [c] ..." (p.44). In most cases it seems that his intent is roughly synonymous with indicating a specific "tetrachord." al-Shawwa reserves the terms jins and 'iqd (tetrachord and pentachord, respectively) for a separate section of his maqam descriptions, which he calls the "analysis" (taḥlīl) of each maqam.

13. Reichow (1971:6) suggests that D'Erlanger's presentations of the characteristic melodic movement of each maqam are but descriptions of the movement in 'Ali Darwish's various taqāsīm.

14. As noted above, 'Ali Darwish graduated from the Turkish music institute in Istanbul, called Dar al-Alhan (Ibn Dhurayl 1969:14 n.2). The Dar al-Alhan apparently existed only for a short period, i.e., from 1917 to 1926 (Oztuna 1969 v.1:153). The Turkish connection was especially strong in the case of 'Ali Darwish since he was a nay player in a Sufi (Mevlevi) order. D'Erlanger points out that the monasteries of the Mevlevi order served as conservatories for the traditional

music within Ottoman empire (1949:380).

15. Beyond these comments, three of D'Erlanger's modes were rejected as being too similar to other modes (Kitab Mu'tamar 1933:145) and two others were accepted over the objections of one of the committee members (ibid.:141).

For a few modes, D'Erlanger includes comments on alternative interpretations but these seem likely to have been provided by 'Ali Darwish himself rather than by the special committee. See, for example, 'Ali Darwish's two versions of taqāsīm for the mode Shawq Awir (D'Erlanger 1949:155).

16. In at least seventeen cases, D'Erlanger's descriptions of the melodic movement for a given mode differs in his earlier and later works. Compare, for example, 1933:213 with 1949:162, and 1933:265 with 1949:232. In a few cases, D'Erlanger documents more than one accepted path for the melodic movement in a given maqam (see 1933:255 and 257; 1949:154).

Signell, when confronted with differences in "notated seyir-s" in Turkish music, commented, "No matter how expert the composer of a seyir ... there always exists the problem that his statement is a personal understanding of a rich and complex tradition. Moreover, the same composer would often be able to provide several seyir-s for a single makam, each substantially different" (1977:61).

17. While this means that present-day musicians or scholars could use middle-period descriptions of melodic movement prescriptively to inform their own compositions and/or improvisations, there is no evidence that anyone is using this material in this manner. Few in the present-day read the middle-period works. A new understanding about the melodic movement specific to each maqam has led those interviewed in Cairo to reject middle-period descriptions as too specific, too confining (see the following pages).

18. It is possible, of course, that Villoteau and his staff simply did not ask the right questions or failed to notice an underlying aspect of the practice, one which even the musicians of that time might not have been explicitly conceptualized.

19. This footnote is given in both French and Arabic. The words "le mouvement melodique" in the French version are given in the Arabic as bayān ṭawr-hā, i.e., "the explanation of [the maqamat's] development."

20. Qasis also adds a new point to support his stance: the repetition of the same note of entry and the same general lines causes bordeom in the minds of the listeners(!)(ibid.).

21. If, for example, a piece were written with the primary goal, say, of setting the poetic text rather than of typifying the mode's traditional approach to melody formation, then this particular composition might not be a good example for the student of Arab music who wants to learn the particular melodic characteristics unique to that mode. In the absence, however, of any standard music literature, there is nothing to stop the student from picking a uncharacteristic piece as his model for a particular maqam.

22. Kirdan, Mahur, Muhayyar, and Bayyati ‘Araban are said to be characterized by descending progressions. al-Sabbagh, for example, writes for each that it "begins from the octave to the tonic" (*min al-jawāb ilá al-qarār*) (1950:42 and 48). For ‘Ushaq Turki, Salah al-Din (1950:136) writes that it differs from Bayyati only in the manner in which it is performed (the *tarīqat al-‘amal*). He informs us that "the performance of ‘Ushaq Turki begins from the note C to D; then the degrees of the Bayyati scale follow; then the settling is on the note D after touching the note C. In this manner the character of each of the two modes differ." Surprisingly, though, we are never told what Bayyati's specific *tarīqat al-‘amal* is.

Elsner (1973:40ff.) stresses that occasional comments by Salah al-Din with respect to temporary tetrachordal changes and accidental melodic phrases (see Section H, above) are all important examples of the conceptualization of melodic movement. For example, maqam Rast is said to have B-b- but it sometimes uses Bb in descent; at such times the maqam has a Nahawand (or Busalik) tetrachord on G (G A Bb c) rather than a Rast tetrachord on G (Salah al-Din 1950:105). Similarly, maqam Suzdulara is said to be similar to Rast except that it shows maqam Husayni on D and then settles on C; it also includes accidental phrases such as phrases from maqam Nakriz (ibid.:109). And maqam Rahat al-Arwah is said to close with an ‘Iraq tetrachord, i.e., with BB-b- C D E-b- (and F) instead of its more fundamental notes, BB-b- C D Eb and F# G.

23. Salah al-Din (1950:115) gives four maqamat which he says shares the same scale as maqam Husayni, differing only in the manner in which it is performed (the *tarīqat al-‘amal*) and in the introduction of some accidental melodic phrases. These are Muhayyar, Tahir, ‘Ardibar, and Husayni Kul‘izar. Besides these five (including Husayni), he also mentions Rast and Kirdan, and ‘Ushaq Turki and Bayyati as sharing the same scales.

The tendency to recognize only one mode per scale is already evident in al-Khula‘i's presentation of the modes used in Egypt at the turn of the century. Except for the Kirdan and "other" Rast examples, all his maqamat are scalar "isolates." (See Jairazbhoy 1971:53 for this use of the term, "isolates").

24. *Layālī* and *mawwāl* are solo vocal improvisatory genres. The singer improvises using variations of the words "ya layl" and "ya `ayn" in the former; in the latter the singer uses a poetic text.

25. Such statements assume "free standing" *taqāsīm*, i.e. *taqāsīm* not linked to a previous piece of music. *Taqāsīm* which, in performance, immediately follow a piece in the same mode will commonly omit the initial statement of the tonic area. This is because the previous piece is understood to have already established this area.

26. Two of my informants/teachers did, however, recognize the existence of a small number of descending modes. Jihad Racy taught that Muhayyar and, often, Kurd follow descending progressions. `Abd al-Halim Nuwayrah stated that if you start a Bayyati *taqāsīm* in the octave (the *jawāb*), then it is maqam Muhayyar, a kind of Bayyati (personal communication 11/21/82).

27. The dichotomy between the static and dynamic aspects of the modes in especially clear in D'Erlanger's work. While the scale of each maqam is presented as starting with the tonic, the *`amal* of the maqam starts with a specific note from its scale, not necessarily the tonic.

28. *Sayir* or *seyir*, is, however, a recognized term in modern Turkish music theory. Yekta, for example, writes, "Each Turkish mode [has] its special melodic movement which we name *sayir* which has the sense of 'promenade'..." (1922:2996). Signel comments, "A detailed yet generalized exposition of the progression of a given makam is called *seyir* (literally, 'path')" (1977:60).

K. MELODIC MOTIVES

Melodic motives specific to each maqam are not recognized in the indigenous Arabic literature, except to the extent that the melodic lines given in Mashaqah and earlier (in the c.fifteenth century work by Shams al-Din, for example) can be interpreted as providing motivic data. Available evidence suggests that this non-recognition in written sources parallels a lack of recognition of motivic elements by teachers and performers of Arab music. Berner, for example, reported after studying in Cairo in 1931-33, "It has become clear as a result of my personal observations and direct questions in Egyptian musical circles that the Egyptian himself is not aware of ... motivistic elements in his maqamat ... His whole way of thinking ... focuses only on the tonal factors in the maqam ..." (1937:42). During my own studies in Cairo, I also found this to be the case. Theorists, musicians, and music teachers whom I interviewed and took lessons from did not conceptualize the existence of specific melodic motives.

While ignored by theorists and musicians in the Middle East, the issue of melodic motives has received much attention from twentieth-century Western scholars who have sought out motivic features in their studies of modal systems around the world (Powers 1980:377; see also Elsner 1973:80). A number of these scholars report finding such features in the Arab system of maqamat. Idelsohn, for example, concluded that "each maqam has its own unique series of tones and motives, which repeatedly appear in variation"; and, "A certain group of motives ... express the uniqueness of [each] maqam" (ibid.:13). Hornbostel, quoted by Lachmann, resolved that "[m]aqam is a quality of form [gestalt] determined by tonal and motivistic factors" (Berner 1937:17). Berner found that motivistic elements appear "again and again" in performance (ibid.:17 and 27). Lachmann and Fox-Strangways declared that maqamat are distinguished by "typical phrases" (1935:578). And finally, Nettl recognizes short motifs of "three to five notes" as being "associated with each maqam; these evidently must appear at least occasionally" (1973:13).

Attempts by Western scholars at isolating motives characteristic of each maqam have, however, produced only meager results: a surprisingly small number of motives are identified (see Idelsohn 1913 and 1923; Berner 1937; Gerson Kiwi 1967 and 1970). Idelsohn, for example, gives only fives motives found in three modes in a presentation of twenty-four maqamat; he offers no motives for many of the most common maqamat, including Rast, Nahawand, and Bayyati.

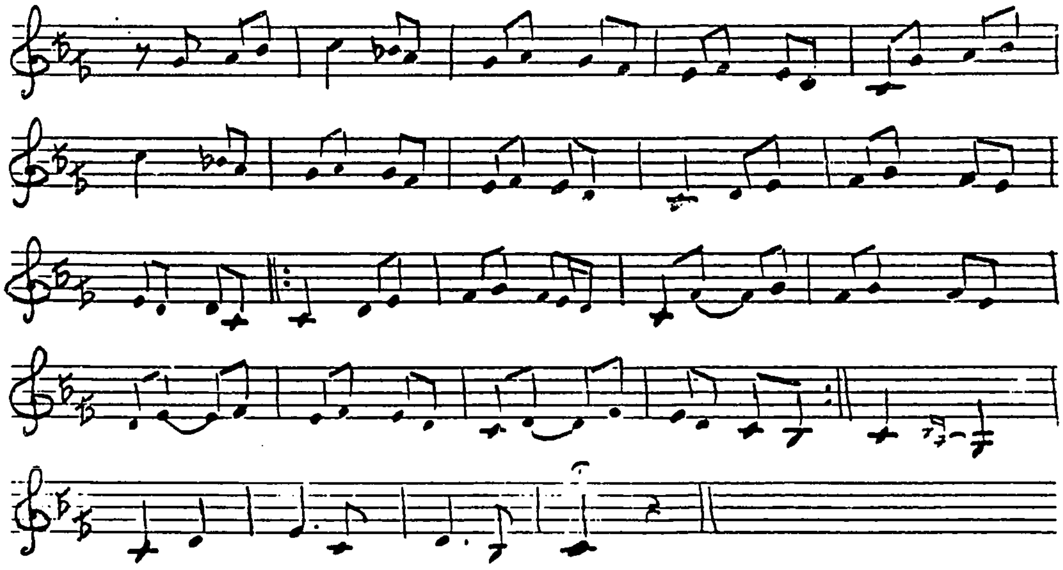
The recognition of melodic motives by a number of Western scholars has not gone unchallanged (see, for example, Touma 1971:39). The most direct statement against such motives is found in al-Faruqi's doctoral dissertation where "the claim that each maqam is associated with characteristic melodic patterns" is discussed in a section entitled "misconceptions regarding maqamat":

> Most writers hesitate to advance more than hazy ideas about the nature of these motifs, but Professor Edith Gerson-Kiwi (1967) and Abraham Z. Idelsohn [1923] have dared to "put their heads on the block" by presenting actual "motifs" or "melodiemodelles" said to be related to particular maqamat. The melodic motifs presented by Gerson-Kiwi and Idelsohn were checked with performances and transcribed music involving the same maqamat ... They were found to have no validity in the available materials.
>
> Instead of evidencing maqam motifs, the repetition of patterns which these scholars observed in the music are actually patterns peculiar to the particular performance involved, to the performer, or to the school of playing. They are not exclusive to a particular maqam ... Whether belonging to a composed piece or an improvisation they are readily interchangeable from one maqam to any other whose tonal material allows transfers. [Any melodic motives which appear in pieces or improvisations must be viewed] as formal, not modal, elements. (al-Faruqi 1974:101-102)

al-Faruqi's argument against the existence of characteristic melodic motives can be seen as focusing on three separate issues. According to al-Faruqi, if motives do exist, they must, first of all, be universally recognized (apparently, by 'all' musicians of Arab music). Second, they must be obligatory; that is, they should appear in all performances (of sufficient length) of the mode in question. And third, they must appear exclusively in that maqam and not in any other modes.

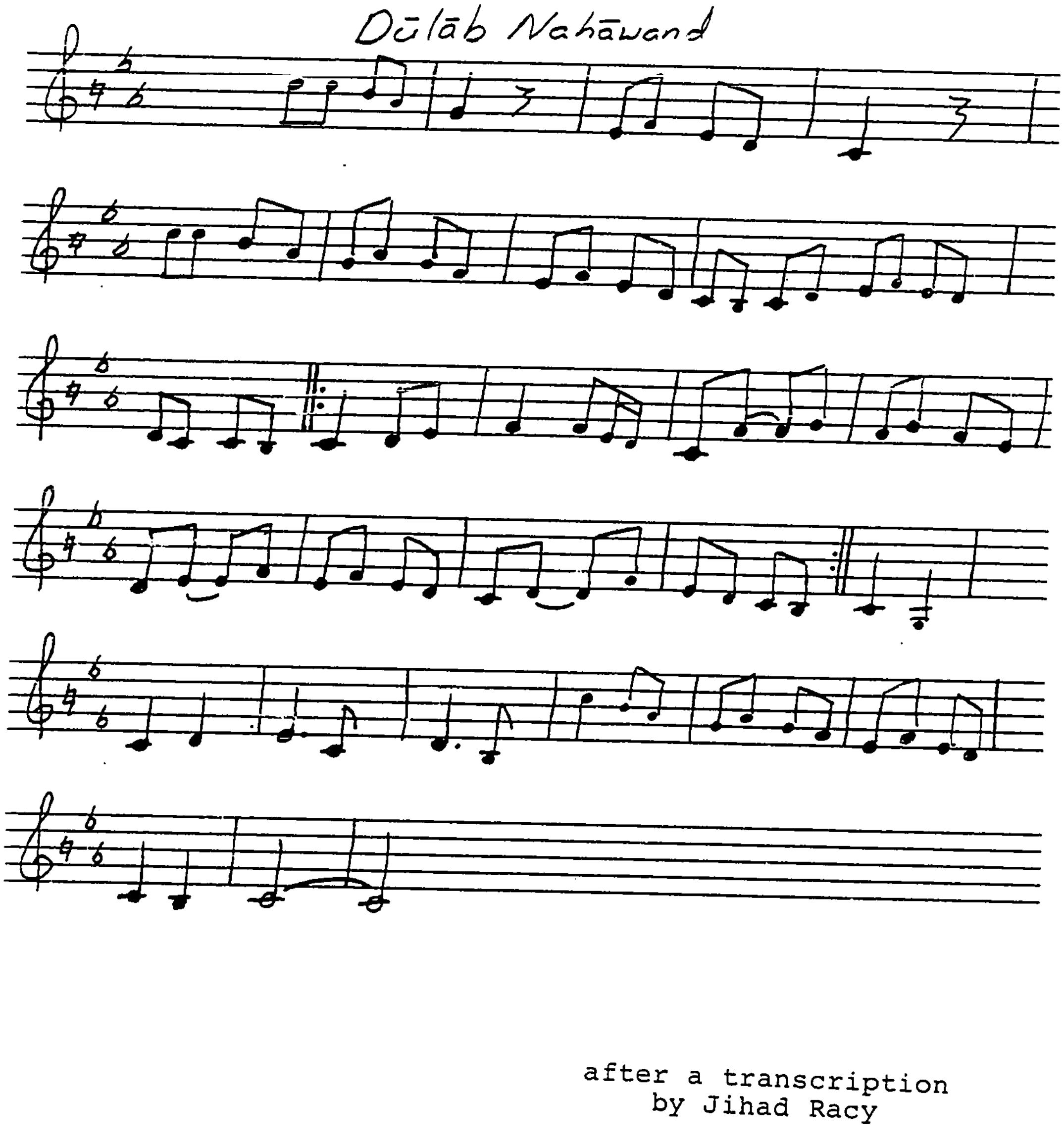
If one accepts these three requirements then it is clear that Arab music does not have characteristic melodic motives for each mode. First, there are no motives used by all musicians. Second, there are no motives found in all performances of a given mode. [1] And third, exclusivity is not a feature of Arab melodic practice. On the contrary, Arab music allows modal transposition of most melodic phrases from one maqam to related maqamat. Note, for example, the following two dūlāb-s (a dūlāb is a short instrumental composition often performed as a prelude), in maqam Rast and maqam Nahawand, which are modal transpositions of each other for the most part:

Dūlāb Rāst



transcription
by Jihad Racy

Dūlāb Nahāwand



after a transcription
by Jihad Racy

In the same way, most of the cadential patterns (*qaflah* pl. *qaflāt*) used in one mode can be transferred to structurally similar modes. For example, *qaflāt* in Bayyati can usually be transposed and played in Kurd or Hijaz. Similarly, those in maqam Rast can often be transposed and played in maqam Nahawand.

a *qaflah* in Bayyati:	in Kurd:	in Hijaz:
F G - F E-b- - D	F G - F Eb - D	F# G - F# Eb - D

a *qaflah* in Rast:

G - F E-b-, F - E-b- D, E-b- - D C D C, E-b- F E-b-,
E-b- - D C.

the same *qaflah* in Nahawand:

G - F Eb, F - Eb D, Eb - D C D C, Eb F Eb, Eb - D C

Despite these points, the student of Arab music performance soon finds that there are a rather large body of cliché phrases which commonly appear in the performance of the various maqamat, especially in the *taqāsīm* genre. [2] These phrases are not obigatory and are not necessarily exclusive to any one maqam. They are, however, common and typical of the maqamat in which they are found (see Olsen 1974:199 for a similar statement). For the student of Arab music performance, it is important to learn these phrases so that he can successfully evoke a given maqam when the opportunity/need arises. Such phrases can be grouped into three categories: introductory phrases (those which begin a new tonal area of focus, especially in taqāsīm performance); cadential phrases (qaflāt); and phrases which occur somwhere between introductory and cadential phrases.

Introductory statements which seek to establish a new tonal center often relay on one of a number of cliché phrases. In taqāsīm in maqam Bayyati, for example, the initial statement of the tonic region might begin, C BB-b- C D D D D, or F E-b- D E-b- F E-b- D C D D D D. Bayyati's initial phrase to the dominant is often, F G A G, F G G G G, or F E-b- F G A G, F G G G G. Taqāsīm in maqam Saba often begin, F Gb F E-b-, Gb, F E-b- F F F F. The introduction to F as a tonal center in maqam Rast often uses the phrase, C D E-b- F G F E-b- G F F F F. These phrases, usually ascending in nature, occasionally contain a melodic leap that is characteristic of the maqam in which they occur. Taqasim in Huzam, for example, often introduce its dominant, G, with a leap from E-b- to G: E-b- G G G Ab G F... [3]

Qaflāt are cadential phrases which rely on a rhythmic figure to propel the melody to a cadence on the desired note, often a mode's tonic (but also the dominant or other note of structural or temporary importance). A student must know a number of qaflāt in each maqam. As mentioned above, most qaflāt can be transposed to related maqamat.

Cliché phrases which occur somewhere between introductory and cadential phrases are probably the rarest of the three types of clichés. One example, in maqam Nahawand, consists of a descent from Ab to D which is followed by two parallel descents, from G to C, and from F to BB; this is then followed by a resolve on the tonic C: Ab - G F, F - Eb D; G - F Eb, Eb - D C; F - Eb D, D - C BB..., Eb D C BB C C C. [4] A similar three-part descent is effective for evoking the central octave of maqam Bayyati: Bb A G F, G A G F E-b-, F G F E-b- D, C D D D D. As a last example, an important aspect of maqam Huzam is evoked by the following phrase: c B A# B, F E-b- D=/= E-b-.

In conclusion, melodic motives characteristic of the various maqamat are not indigenously recognized. Clearly, there are no motives which the performer/composer is obliged to use. Because of the possibility for modal transposition, phrases which commonly occur in any one maqam cannot be considered the exclusive property of that maqam. Nevertheless, there are a large body of phrases which commonly occur in *taqāsīm* in the various modes. Knowledge of these phrases is essential for the student of Arab music performance.

NOTES FOR CHAPTER X, SECTION K

1. Elsner (1973:76) presents a unique understanding regarding melodic motives. He finds that a mode's constituent tetrachords have general characteristic melodic tendencies in the form of characteristic turns. He concludes that these melodic turns are the closest that Arab music comes to concrete melodic formulas or motives. As an example, he says that the Bayyati tetrachord has a characteristic turn from F to G and back to F: F G F E-b- D (ibid.:66).

2. Berner reached a similar understanding when he concluded that "in observing practice the motivistic factors are again and again pushed to the foreground" (1937:17). Nettl and Riddle also find short "stereotyped motifs ... used to begin and end sections" in sixteen taqāsīm performances by one musician (1973:13).

3. Powers also recognizes such cliche phrases: "To be sure, characteristic motifs often play identifying and formal roles: there is often an initial 'stereotyped motif', such as that heard at or near the beginning of segah [Sikah]" (1980:427). Powers identifies this motif as C D# E-b-.

4. Although I initially learned this phrase from Jihad Racy, its importance was brought home to me in Cairo when I was asked to play a taqāsīm in Nahawand. After a minute or two of my attempt at a Nahawand taqāsīm, an `ūd player who I was with commented that I had not succeeded in evoking the character of the maqam, whereupon he showed me this same phrase.

L. SPECIFICS OF INTONATION

For a large number of Arab musicians, specifics of intonation play a major role in the definitions of the individual maqamat. For example, the Eb of maqam Nahawand is said to be "a little low" or "minus a comma." The E-b- of maqam Rast is said to be a little higher than the E-b- of maqam Bayyati. This phenomenon has led Carmi-Cohen to note that "each maqam imposes a specific pattern of pitch deviation [from the theoretically established tones and intervals] ... Thus, in terms of pitch alone the *maqam* must be regarded as a melody-type and not simply as a scale" (1964:104). This issue is discussed at length in Chapter IV, Section B, above.

Specifics of variant intonation are explicitly discussed in only a small number of the sources used for the present study, e.g., the 1932 Congress publication (*Kitab Mu'tamar* 1933), al-Shawwa (1946), and al-Sabbagh (1950). The issue is commonly ignored by mainstream Arab music theory, be it in the early, middle, or present-day subperiods.

M. TRANSPOSITION

Transposition has been an important component of Arab music theory and practice since the Middle Ages. In the modern period a number of writers, starting with Mashaqah ([c.1840] 1899:629ff.), have devoted separate sections to this aspect of the maqam system, commenting on its importance and on the procedures/calculations necessary to ensure intervallically correct transpositions. [1]

At the basis of the concept of transposition are two related understandings: first, each maqam is understood to have a root (*aṣlī*) position in the general scale (Mashaqah 1899:629; al-Khula'i 1904:38; etc.); and second, a maqam is not restricted to this one position. When it appears elsewhere in the general scale, it is considered to be transposed (*muṣawwir*). Transposition is called *taṣwīr*; see Mashaqah [c.1840] 1899:629 or 1913:84 for the use of this term at the beginning of the modern period. (*Taṣwīr* and *muṣawwir* are verbal noun and passive participle, respectively, of the verb *yuṣawwir*, literally, "to represent, portray; to make a picture; to photograph.") Another important term in discussions of transposition is the word for pitch level, *ṭabaqah*, literally, "layer, stratum, class" (see Mashaqah ibid.). A mode can be played at its root position (*ṭabaqah aṣliyyah*) or at a higher or lower *ṭabaqah*.

Prior to the modern period, when Safi al-Din's seventeen tone scale reigned as the primary theoretical understanding of the Arab general scale, a mode could, theoretically, be transposed to each of the seventeen tones. This is explained and demonstrated in numerous treatises from this period. Villoteau, for example, reports on one such treatise in which the twelve most common modes are transposed to all seventeen positions (1826:69ff.). [2] (See also Wright 1974:491.)

In the modern period, theorists have applied this same principle of transposition to the new quarter-tone scale. Each mode could now be transposed to twenty-four different positions per octave. We will see that only a few of the possible transpositions are ever used in practice; however, a number of theorists and music educators have equated a thorough understanding of the maqam system with the ability to theoretically transpose each maqam to any of the twenty-four quarter-step positions. Salah al-Din, for example, devotes an entire book to teaching this ability. [3]

Transposition is considered by many to be a delicate art. See, for example, the following passage by al-Sabbagh which contains ideas similar to those expressed by a number of my Cairo informants (including George Michel, personal communication 6/87):

> The art of transposing the modes [anghām] is among the subtlest and hardest aspects of Arab [Eastern] music ... Transposition requires firstly a precise knowledge of the steps of the different modes; secondly, it requires subtle feelings and strong sensitivity of the modes so that the transposed mode emerges as [if it were the mode in

> root position] [this line also appears in 'Arafah 1976:15] ... It is very rare indeed that you hear an instrumentatist, especially on the violin, 'ūd, or nāy, improvize ... in a transposed mode and he enchants you and makes you feel as if he is playing without transposition ... Part of the reason for this is an ignorance of the true nature of the intervals ...
>
> I advise anyone who feels himself weak/deficient in the perception of the modes, that he should avoid transposition, because he will make his listeners turn away from him and from his transpositions and his modes just as people turn away from seeing a man walking along the street without clothes to cover him, because it exposes a deficiency in his sensitivity ... (1950:54) [4]

In the present day, the student of Arab music is taught transposition using two different methods, one traditional and one of recent origin. The former simply calls for the replication of a given modal scale at the desired new pitch level. Mashaqah comments that this requires a thorough "knowledge of the intervals of the notes one from another in terms of the number of quarter steps [arbā'] ..." ([c.1840] 1899:630; 1913:84). By way of illustration he describes the transposition of the modes Dukah and Rast to G (Nawa).

Mashaqah (1899:631-32) tells us that the "masters of the art" devised a mechanical aid for ensuring accurate transpositions based on this process of scale replication. Later dubbed al-būṣalah al-mūsīqiyyah, i.e., "the musical compass" (see Salah al-Din c.1947), this devise is described on p. 108 above. The compass was apparently common in Mashaqah's time but came to be viewed as a historical relic by the early years of the twentieth century. In c.1947, Salah al-Din tried to resurrect this devise by publishing a modified version under the title *al-Busalah al-Musiqiyyah li-Taswir al-Maqamat al-‘Arabiyyah* (The Musical Compass for Transposing the Arab Maqamat). During my fieldwork in Cairo, however, it was clear that this publication is little known and is not used by present-day musicians, theorists, students, or teachers of Arab music. [5]

A second method for transposing is based on the manipulation of the given maqam's key signature (*dalīl*) (see Chapter X, Section N, below). It requires a thorough knowledge of the principles that govern Western key signatures including the fact that flats are written following the cycle of fourths (Bb Eb Ab, etc.) while sharps are written following the cycle of fifths (F# C# G#, etc.). Minimally, the method requires the following three steps. The student must first identify the key signature of the mode in question, then transpose the key signature, and finally build the modal scale based on the new key signature. Salah al-Din was probably the first to advocate this method (see his *Taswir al-Alhan* [1948] c.1950, his 1960 work [p.94ff.], and his chapter in *al-Halqah* 1964:32). He touts this new approach to transposition as a "new scientific method" (*al-ṭarīqah al-‘ilmiyyah al-jadīdah*). It has subsequently been adopted by a small number of present-day writers and music educators (see, for example, Fatah Allah et al. 1979:110ff.). The procedure for transposing maqam Rast by this method as given in Fatah Allah et al. as follows (ibid:111-12):

When asked to transpose maqam Rast to a specific pitch, the student should first determine the key signature of the major scale on that new pitch. Second, if the key signature contains flats, then two additional half-flat accidentals should be added following the cycle of fourths; this is necessary in order to indicate Rast's neutral third and seventh (see example 1 below); if, however, the key signature contains sharps, then the last two accidentals should be changed to half-sharps (see example 2 below). Finally, the student should build the new scale based on the new tonic.

ex.1: transpose Rast to F: the key signature of F major has one flat (Bb); therefore, add two additional half-flat accidentals (E-b- and A-b-). Then build the new scale from the tonic F.

ex.2: transpose Rast to D: the key signature of D major has two sharps; change both to half-sharps (F=/= and C=/=) and then build the new scale from the tonic D.

Transpositions: Theory versus Practice

While transposition to every possible degree in the twenty-four-tone scale is an important theoretical principle for many theorists and music educators, in practice modes are transposed to only a small number of the possible positions. Villoteau noted this in the Egyptian practice at the end of the nineteenth century: "Far from it that the Egyptian musicians know and use all the modes of Arab music and all the *ṭabaqah* to which each of the modes can be transposed ... They can perform [the modes they do play] on one or two *ṭabaqah* only ..." (1826:124).

D'Erlanger observes that it is "[p]ractice [which] ... has imposed the choice of certain specific degrees as tonic for this or that mode [in transposition] because these degrees permit the transposition of the succession of intervals with the aid of the principal degrees of the [general] scale, having recourse to the smallest possible number of altered notes" (1949:109). The most common transpositions are those at a fourth or fifth. Two factors have contributed to this limited use of transposition. First, the intervals in the fundamental Arab scale repeat at the fourth or fifth: the intervals in the scale segment GG AA BB-b- C D are matched at the fourth by C D E-b- F G; the latter seqment is in turn matched at the fifth by G A B-b- c d. Second, the open strings on the *ʿūd* are tuned in fourths (AA D G c). Thus transpositions at a fourth keep the same fingering on this instrument; one need only shift to the neighboring string. C-based modes are thus commonly transposed to F, GG, or G, D-based modes to G, AA or A, and E-b- based modes to B-b- (D'Erlanger 1949:110 and elsewhere). (See, however, the discussion below of the *ṭabaqah ṣaghīrah* and *ṭabaqah kabīrah* used in present-day Cairo.)

Occasionally, however, one does come across musicians who are fond of including unusual transpositions in their *taqasim* performances or, more rarely, in their compositions. D'Erlanger remarks that musicians do this largely to "astonish the audience with their prowess" (1949:110). The most difficult and obscure transpositions are those which require that a mode normally based on a whole- or half-step position be built on a half-flat or half-sharp position, or that a mode normally based on a half-flat position be built on a whole or half step. One of my informants, for example, enjoyed playing the maqamat Nahawand, `Ajam, and Kurd (with the tonics C, BBb, and D, respectively) all transposed to E-b-. He recognized that this was most uncommon and causes everyone to "... gape and open their mouths ..." (Yusuf Shawqi, personal communication 2/12/83). The notes needed for these transpositions--all are either half-flats or half-sharps--attest to the unusual nature of the resulting scales:

Nahawand on E-b-: E-b- F=/= G-b- A-b- B-b- c-b- d=/= e-b-
`Ajam on E-b-: E-b- F=/= G=/= A-b- B-b- c=/= d=/= e-b-
Kurd on E-b-: E-b- F-b- G-b- A-b- B-b- c-b- d-b- e-b-

There are a few examples of music compositions which contain moments of maqam Sikah or Huzam, transposed to a whole-step position. See, for example, Muhammad `Abd al-Wahhab's "al-Karnak," which contains moments of maqam Huzam transposed to C.

No matter how rare these examples are in the realm of music practice, many theorists and music educators insist that students of Arab music be able to transpose any maqam to all twenty-four quarter-step positions, if not on their instruments then at least on paper. Salah al-Din (c.1950:181), for example, leads his readers through the steps involved in transposing maqam Rast to the note tik Busalik (E=/=, mi nisf diyaz). Qasis shows the notes of Huzam transposed to C in his discussion of transposition (n.d.:226-227). Muhammad (1984:18) asks her readers to transpose a Rast tetrachord to F#: C D E-b- F becomes F# G# A=/= B. (See also the many unusual transpositions in Mash'al *al-Tafsir* n.d., and al-Sabbagh 1950:55-56; see note 4 for examples from al-Sabbagh.)

Rast in root position:
C D E-b- F G A B-b- c

Rast on E=/= (=///= means three-quarters sharp):
E=/= F=///= G# A=/= B=/= c=///= d# e=/=

Huzam in root position:
E-b- F G Ab B c d e-b-

Huzam on C:
C D-b- E-b- F-b- G=/= A-b- B-b- c

A Theory for Classifying Transpositions

Although indigenous theory does not conceptualize different types of transpositions, it is possible to classify the transpositions that occur in performance into two (and possibly three) basic groups. The first group contains those transpositions which are required by the rules of modulation. These rules are discussed in Chapter XI, below. Stated in simplified form, modulation in Arab music is not permitted between modes whose tonics are a major or neutral second apart from each other. Thus, one cannot modulate from a C-based mode to a D-based mode, from a BBb-based mode to a C-based mode, from a D-based mode to an E-b- based mode, and vice versa. The modes which would seem to be unavailable because of this rule become available if they are first transposed: To modulate from a C-based mode (Rast, for example) to a D-based mode (Bayyati, for example), the D-mode must first to transposed to G; the modulation is thus from Rast to Bayyati on G. Similarly, in order to modulate from a D-based mode to a C-based mode, the latter must first be transposed to G; the modulation is thus from Bayyati on D to Rast on G. And, in order to modulate from a D-based mode (Bayyati, for example) to an E-b- mode (Huzam for example), the latter must first be transposed to B-b- (or BB-b-); the modulation is thus from Bayyati on D to Huzam on B-b-. These transpositions are required by the rules of modulation (see diagram at the end of this section).

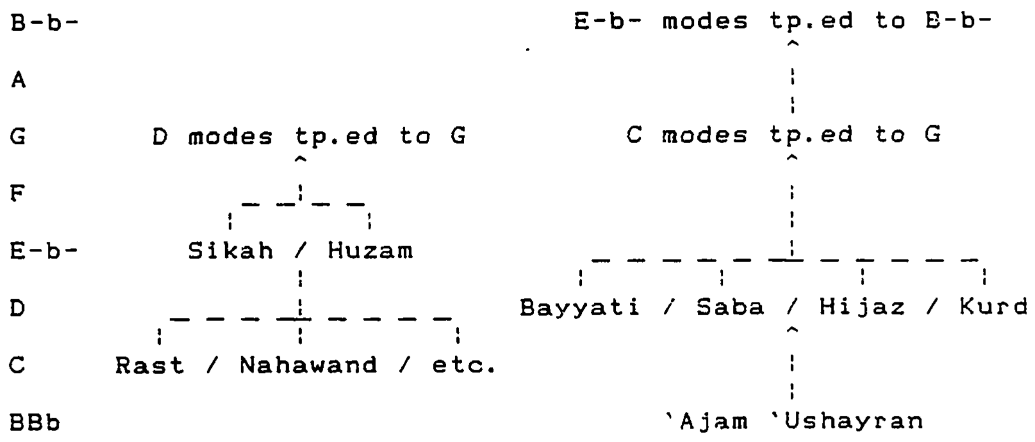
I will refer to transpositions which result from the rules of modulation as first-order transpositions. First-order transpositions are an inherent aspect of the maqam system. They are not a matter of choice. Maqam Rast in root position (i.e., based on C) requires that Bayyati be transposed to G. Maqam Bayyati in root position requires that Rast be transposed to G. First-order transpositions, thus, are those which are required by the modes in root position. [6]

The second group of transpositions, what I call "second-order" transpositions, are those that result from an aesthetic decision by the singer, director, composer, or instrumentalist rather than from the requirements of the maqam system itself. For example, a mode might be transposed to accomodate a singer's vocal range. A song in Rast on C might have too low a range for a singer and might thus be transposed to F. Songs in D-based modes might have too high a range for some singers and might be transposed to AA. [7] (This was the case with Umm Kulthum in the last years of her life. In order to accomodate her lowered range, she sang two songs in D-based modes transposed to AA: "Aml Hayātī" and "Inta 'Umrī" are both in Kurd on AA.) A music director might choose to transpose a number of pieces to a common tonic (G, for example) so that they can be performed one after another in a suite-like arrangement. A composer or performer might choose a transposed mode (Bayyati on G rather than on D, for example) because of the different aesthetic quality of the tranposed mode. Mashaqah recognized this point when he wrote that the playing of a D-based mode transposed to G might "delight the listener" ([c.1840] 1899:629). The composer, or instrumentalist performing taqāsīm, might also pick a transposed mode because of the latter's unique melodic potential. For example, with Arab music's overall two-octave ambitus from GG to g, Bayyati on G has the potential for a full octave descent below the tonic; this descent is not possible in Bayyati on D. (Note such a descent in the instrumental introduction to the Umm Kulthum song "al-Qalb Ya'shaq," which is set in Bayyati on G.)

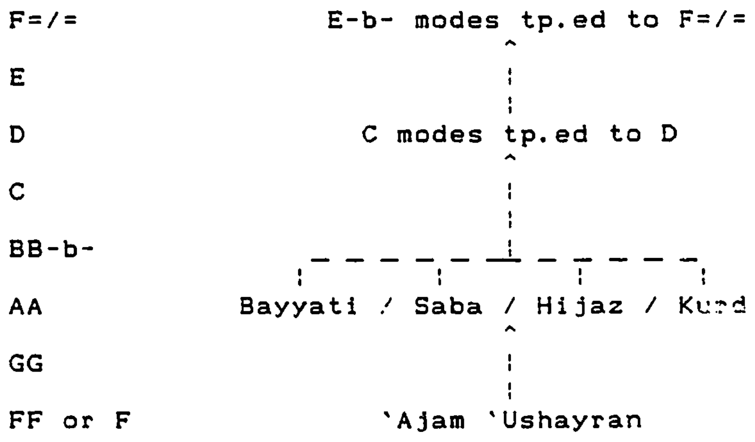
Second-order transpositions also differ from first-order transpositions in that, rather than being an intrinsic part of the maqam system in root position, they commonly involve a "full-system shift"; i.e., the entire system of maqamat becomes transposed. Kurd or Bayyati transposed to AA are examples of second-order transpositions. When Kurd or Bayyati are transposed down a fourth to AA, the interrelationships among the maqamat do not change; rather, all modes are, in effect, transposed down a fourth. All D-based modes occur on AA. C-based modes must now be considered as if they are based on GG. Just as modulations from D to C modes are not allowed, so, transposed down a fourth, modulations from AA to GG modes are also not allowed. In order to modulate from Bayyati on AA to Rast, the latter mode must be tranposed to D. Thus, the rules for modulating among the maqamat (including required transpositions) are all retained: everything is transposed down a fourth. (See the diagram at the end of this section.) Another example of a second-order transposition is when maqam Rast is transposed to F.

A case can be made for a separate category of "third-order" transpositions. This is for those transpositions which do not occur "on their own" but rather occur because of the modulatory requirements of second-order transpositions. Rast on D is an example of a "third-order" transposition. It commonly occurs only within D modes that have been transposed to AA. Another example maqam Huzam transposed to F=/=. F=/= is a rather unusual position for this E-b- based mode; I do not know of a single example of a composition or improvisation that is set in Huzam on F=/=. However, when improvising or composing in a D-based mode transposed to AA, E-b- based modes are available only if they are transposed to F=/=. (This is explained as follows: normally, modulations from Bayyati on D to Huzam require that the latter mode be transposed to B-b-. When Bayyati is transposed down a fourth, so Huzam on B-b- must also be transposed down a fourth, i.e., to F=/=.)

The following diagram shows the maqam system in root position along with the first-order transpositions that are required by the rules of modulation. When modulating from a mode based on C or E-b-, then D-based modes must be transposed to G. When modulating from a mode based on D or BBb, then C modes must be transposed to G, and E-b- modes must be tranposed to B-b-:



The following diagram illustrates an example of a "full-system shift." Here, the D modes, transposed down a fourth to AA, can be considered second-order transpositions. The transpositions required by the rules of modulation also occur tranposed down a fourth (these latter might be considered third-order transpositions):



In conclusion, transposition is an essential aspect of Arab music performance. While it is theoretically possible to transpose any mode to each of the twenty-four quarter steps per octave, the transpositions that commonly occur in practice are limited to a small number of positions that are determined primarily by a mode's tonic pitch. That is, C-based modes tend to be transposed to the same degrees, D-based modes to the same degrees, etc.

NOTES FOR CHAPTER X, SECTION M

1. See, for example, al-Khula'i 1904:38ff. who copies Mashaqah's passages with minor changes; Salah al-Din c.1950; Salah al-Din 1964; al-Sabbagh 1950:54-57; Qasis n.d.:226-228; Mash'al al-Tafsir n.d.:74ff.; Muhammad 1984:17-18; 'Arafah 1976:7-8 and 15; etc. Transposition is also discussed in Chapter IV.A.4.c and in Chapter VIII.D, above.

2. It is not clear which treatise Villoteau is referring to in these pages. It is probably the anonymous al-Shajarah dhat al-akmam (see Villoteau 1826:15). Shiloah (1979:418 and 15) does not date this work.

3. This is Salah al-Din's Taswir al-Alhan al-'Arabiyyah (The Transposition of the Arab Melodies/Modes) c.1950.

4. al-Sabbagh considers transposition especially difficult because he does not believe in the (equal-tempered) quarter-tone system. For him the interval between D and E-b- is larger than the interval between E-b- and F. Prefering to express the intervals in terms of commas, he defines the interval between D and E-b- as seven commas, that between E-b- and F as six commas. The inequality in the size of these intervals makes transposition especially tricky in a number of cases. See Appendix 6 for further discussion of this point. The transpositions he discusses, however, including Bayyati and Rast transposed to E-b- and Sikah tranposed to D, are all extremely rare. A few of my Cairo informants even stated that these transpositions do not occur in Arab music.

5. Nevertheless, sketches and brief descriptions of the device appear in a number of twentieth-century works. See Chapter II, Section D, above.

6. Bayyati and Rast transposed to G are the most common of the first-order transpositions. The former uses the note A-b-; the latter uses the note F=/= as its subfinal. al-Faruqi did not consider the intrinsic nature and the important role of "first-order" transpositions when she concluded that Arab music commonly uses only fourteen of the twenty-four notes per octave of the general scale (1974:66-67). Her fourteen notes do not include either A-b- or F=/=. The same misunderstanding appears in Touma 1977:37. This point is discussed above in Chapter II, Section C.

7. Mashaqah gives this as one of the main reasons for transposition. Without it the singer's voice might be "very harsh"; listening to the voice might be "without pleasure" (1899:629; see also p.727).

In Cairo a number of ensembles, including two that perform with a large choruses (Firqat al-Musiqa al-'Arabiyyah and Firqat Umm Kulthum), have adopted a pitch level which is a whole step below A 440 (or A 435) in order to accomodate the singers. While qānūn players simply begin the modes on a lower string, players of the 'ūd, violin, cello, and contrabass tune their instruments down a whole step. The lower tuning is called ṭabaqah ṣaghīrah, i.e, "the small pitch level," in contrast to the "standard" tuning which is called ṭabaqah kabīrah, i.e., "the large pitch level."

N. KEY SIGNATURE

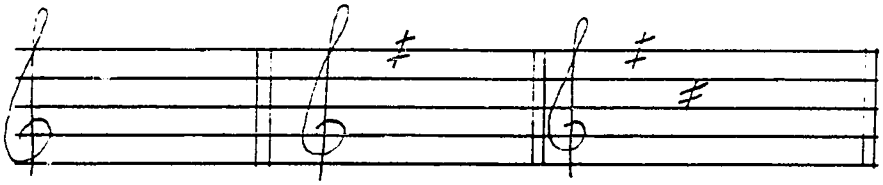
In the present-day period of modern Arab music theory it is understood that each mode has a specific key signature (dalīl; literally, "guide") which the student is required to memorize. It is then with the aid of this key signature that one can recall the specific scale of each maqam. Key signatures are commonly written according to the rules of Western music; i.e., flats start with Bb and then proceed along the cycle of fourths, sharps start with F# and proceed along the cycle of fifths. It is now common, for example, to hear that "maqam Nahawand has three flats," i.e., Bb, Eb, and Ab. Based on C, this gives the scale C D Eb F G Ab Bb c.

Salah al-Din played a major role in encouraging the adoption of modal conceptualization in terms of key signatures. In his [1946] 1950 work, he presents the idea that all of the maqamat can be written using only four basic key signatures: those of maqam Rast (B-b- and E-b-); maqam Bayyati (Bb and E-b-); maqam 'Ajam 'Ushayran (Bb and Eb) and maqam Nahawand (Bb, Eb, and Ab). Maqamat which require combinations of accidentals not found in any of these four key signatures (for example, Hijaz which needs Bb, Eb, and F#, or Saba which needs Bb, E-b-, and Gb) would be assigned the closest of the four key signatures. Any necessary "accidentals" would then be added within the course of the melody; they would not be included in the key signature. [1]

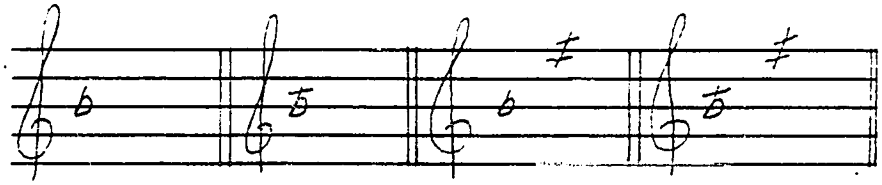
This approach has been widely adopted in the Middle East. There are, however, a number of writers and musicians who prefer to modify the Western rules of key signatures so that they better accomodate the peculiarities of the Arab maqamat. For example, one occasionally sees the following key signatures: Eb and Ab for maqam Nahawand with B natural; Bb, Eb, and F# for maqam Hijaz; and Bb, E-b-, and Gb for maqam Saba.

Conceptualization in terms of key signatures has been used as the basis for a new system for classifying the maqamat (see Chapter IX, above). It is also used to teach students how to transpose the various maqamat to new pitch levels (see Chapter X, Section M, above).

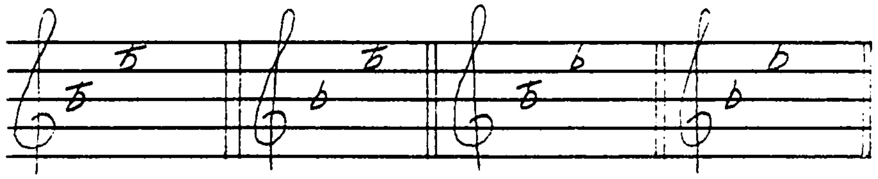
Another use of the key signature, here in the realm of performance, concerns the n̄ay player who must choose among seven or more n̄ay̲ā̲t when he is about to begin to play a piece of music. In Cairo today the n̄ay student is taught to pick the n̄ay on the basis of the piece's key signature (Qadri Surur, n̄ay teacher at two Cairo music institutes; personal communication 6/87). For example, the following key signatures require the Busalik (E) nay (for `Ajam on C, Bayyati on E, and Rast on D, respectively):



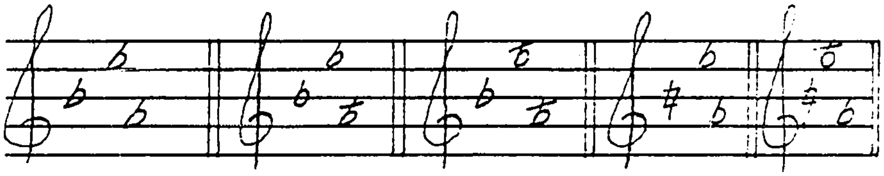
The following key signatures require the Husayni (A) nay (for example, for Kurd on A, Bayyati on A, Huzam on F=/=, and Rast on G, respectively):



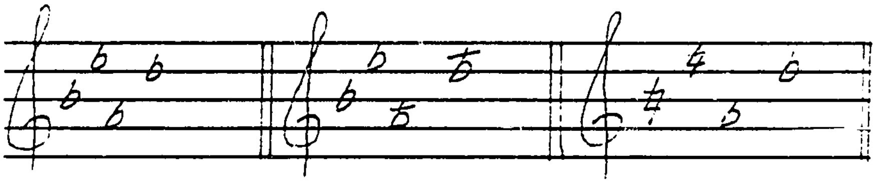
The following key signatures require the Dukah (D) nay (for example, for Rast on C, Bayyati on D, Huzam on BB-b-, and Kurd on D, respectively):



The following key signatures require the Nawa (G) nay (for example, for Nahawand on C, Bayyati on G, Rast on F, Hijaz on G, and Huzam on E-b-, respectively):



The following key signatures require the Rast (C) nay (for example, for Hijaz Kar Kurd on C, Rast on BBb, and Hijar Kar on C, respectively):



NOTE FOR CHAPTER X, SECTION N

1. According to Salah al-Din and other followers of the system of four basic key signatures, these four can be transposed when necessary. The transpositions are considered as but varieties of one of the four basic key signatures.

Subsequently, Yusuf Shawqi (1964:15) and Salah al-Din (1964:25ff.) proposed recognizing only two basic key signatures, that of Rast and `Ajam.

O. SHAKHSIYYAH

In the middle-period theory, a new tradition appeared of including a brief statement within descriptions of the individual maqamat which names those features which distinguish the maqam in question from closely related modes. Such statements were said to address the issue of a mode's shakhṣiyyah, literally its unique "character." [1] Most commonly, shakhṣiyyah statements indicate those tetrachord(s) which distinguish the maqam from modes which share the same lower tetrachord, i.e., from modes of the same faṣīlah. The following examples illustrate the content and intent of such statements. The maqamat `Iraq, Rahat al-Arwah, Farahnak, and Bastanikar share the same BB-b- tonic and the same Sikah trichord on BB-b- (BB-b- C D). They differ most prominently in the structure of their second tetrachord, a tetrachord which in all four cases is built on the note D. D'Erlanger gives the following shakhṣiyyah statements for these modes:

> The shakhṣiyyah of [`Iraq] is created by showing a Bayyati tetrachord on the note [D]. (1933:209)
>
> The shakhṣiyyah of [Rahat al-Arwah] is created by showing a Hijaz tetrachord on the note [D]. (ibid.:211)
>
> The shakhṣiyyah of [Farahnak] is created by showing a Rast tetrachord on the note [D]. (ibid.:213)
>
> The shakhṣiyyah of [Bastanikar] is created by showing a Saba tetrachord on the note [D]. (ibid.:221)

Similarly, maqam Rast and maqam Suznak both have a Rast tetrachord on C but differ in that the former has a Rast tetrachord on G as its branch tetrachord while the latter has a Hijaz tetrachord on G. Shakhṣiyyah statements of these modes are commonly as follows: [2]

> The shakhṣiyyah of maqam Rast is established by showing a Rast tetrachord on [G] and [C]. (see Kamil 1975:54; Fatah Allah et al. 1979:34)
>
> The shakhṣiyyah of maqam Suznak is created by showing a Hijaz tetrachord on [G] and settling with a Rast tetrachord [on C]. (Kamil 1975:55)

Shakhṣiyyah statements occasionally include information beyond indications of a mode's tetrachordal uniqueness. D'Erlanger, for example, comments for maqam Hayyan that this mode's shakhṣiyyah is established, in part, "by showing the higher region of its scale" (1933:239).

Shakhṣiyyah statement's first appear in D'Erlanger's 1933 work (p.183ff.). They are also found in the middle-period works of al-Hilu ([1961] 1972:79 and 94ff.) and Mahfuz (1963-64) and in a small number of present-day-period works (Kamil 1975:49ff.; Fatah Allah et al. 1979:32ff.; Jabaqji 1983:11, 73, and 155; see also Fahmi 1965:78). They are not, however, included in the curriculum at present-day music institutes in Cairo and are not commonly mentioned by musicians or theorists in Cairo today. Shakhṣiyyah statements must, thus, be considered a specialty of the middle-period theory.

NOTES FOR CHAPTER X, SECTION O

1. This discussion of the shakhṣiyyah of each maqam refers to a specific use of the word, i.e., where it names a specific part of the definition of each mode, especially in middle-period works. Shakhṣiyyah should not, here, be understood to refer to a mode's unique emotional or aesthetic "character." This latter issue is discussed in Chapter X, Section P, below.

2. There is some irony in "official" shakhṣiyyah statements since these statements commonly fail to mention the maqam's lower tetrachord. Note that it is this tetrachord which is usually acknowledged to play the greatest role in determining a mode's dominant character.

P. SPECIFIC EXTRA-MUSICAL ASSOCIATIONS FOR EACH MAQAM

Specific extra-musical associations for each maqam were an important part of Arab music theory in the centuries prior to the modern period. By the beginning of the modern period, however, a large portion of these associations were either forgotten or consciously rejected. Most modern writers omit any mention of extra-musical associations. Nevertheless, a few statements do continue to appear in the modern literature. These, plus comments offered by my Cairo informants, show that extra-musical associations have continued to exist throughout the modern period.

Prior to the modern period, extra-musical associations were often highly codified. The whole phenomenon was referred to with the term, ta'thīr (literally, "efficacy, effect, influence")(see Farmer 1943:5). Shiloah summarizes the nature of these associations:

> One common feature to all the sources up to the nineteen century is their concern with specifying the multiple affiliations of the maqāmāt and awāzāt [secondary melodic modes] to ethical and cosmological values. The detailed list of correspondences involves such categories as the planets, signs of the zodiac, seasons, day and night, hours, elements, humours, temperaments, virtues, classes of men, colors, odors, raw materials, alphabetical letters, and poetry and poetical meters. These multiple correspondences were considered important to the musician, who was expected to select the appropriate mode for each circumstance. They were also useful to the physician, enabling him to administer the suitable treatment for each disease...(1981:38; see also p.193 above and Shiloah 1979)

Mashaqah typifies the modern period's view of many of these previous traditions when he fails to mention any extra-musical associations in his presentations of the various modes. He also includes a paragraph at the end of his treatise in which he refutes a portion of these beliefs:

> We mention briefly what the musicians of old said about the modes [alhān] with which they would treat sick people by [having the patients] listen to [the appropriate mode], considering the [latter's] suitability to the dispositions of the [sick] people; namely, Jaharkah is hot and dry and stimulating to the blood; Awj and Nawa are cold and dry; in contrast with these are Husayni and Dukah both of which are hot snd moist/humid; both Rast and Sikah are cold and moist/humid. Then from these is chosen what conforms to the condition [of the patient]. What I think about this idea is that man is stimulated/invigorated by hearing a mode to which his nature is inclined, and this inclination [does not arise] from [one's constitutional] temperament but from the establishment of habit... It refutes the veracity of what they say when we see that people are inclined to use the modes current in their countries, which they have grown up hearing, without considering the constitutional suitability [of the modes], and this, allowing that the constitutional temperament differs among [the people of a given country from] one [person] to another. ([c.1840] 1899:1080; 1913:114 and 64-65; see Smith 1847:217) [1]

Extra-musical associations in the modern period are characterized by two main points. First, such associations are not consistently or systematically noted in the written sources. The few writers who do mention extra-musical associations generally do so for only a small percentage of the modes they discuss, i.e., for a few of the most commonly played modes. In keeping with the informal nature of these comments, there is no acknowledged term for referring to the phenomenon (such as *ta'thīr* in pre-modern sources). Second, comments about extra-musical associations are generally limited to two categories, i.e., those which indicate the moods or emotions that the maqam under consideration creates in the listener, and those which indicate the types of songs that a given maqam is commonly associated with.

We offer a few examples of mood/emotional associations, the first from al-Khula'i (1904:81). al-Khula'i claims to have made some tests and found that Rast and 'Ajam "manifest glory, bravery, high mindedness, and dignity of the soul." 'Ushaq and Jaharkah "sadden, induce crying and grieving, and impart to man when hearing it cowardice and fear." Nahawand and Saba "impart peace and calm to the soul, and well-being and gentleness." And finally, Awj "manifests "excitation and gaiety of the soul." [2]

In the *Rawdat al-Balabil*, maqam Rast is said to create joy and liveliness while maqam Suznak causes longing/desire, agony/burning, and sorrow/grief/ longing/desire (1921:159 and 186). al-Sabbagh (1950), including such comments for only five of the over ninety modes he discusses, states that 'Ajam 'Ushayran "has majesty/pride and loftiness/augustness more than sympathy/compassion..." (p.52); "Saba is among the sad and moving modes" (p.49). The association of Saba with feelings of sadness (*ḥuzn*) is the most commonly acknowledged mood/emotional association in the present day, both in the recent literature and among my Cairo and U.S. informants. [3]

As with the mood/emotional associations, song-type associations are also not systemically developed or applied either in the written sources or among the informants for the present study. Five or six song-type associations are commonly mentioned by those who offer such comments: specific maqamat are said to be especially common 1) in folk music (Bayyati, Saba); 2) in religious music (Rast and Hijaz, as they are the two most commonly used modes for the call to prayer; Bayyati is also mentioned as the chanting of the Qur'an begins and ends in this maqam); 3) in nationalistic songs (`Ajam); 4) in dance songs (Saba, Huzam, etc.); 5) in love songs (Nahawand, Kurd); and 6) in wedding songs (Bayyati, etc.).

A number of informants, however, stress that song-type associations are not to be perceived as exclusive or restrictive. These individuals insist that a composer has complete freedom to choose any maqam he wishes when composing a piece of music, no matter what the emotional content of the song text or the type of song. Surur makes this point by offering a number of examples of songs set in maqam Saba which convey a variety of emotions: one is a nationalistic song, one a religious song, another a love song, etc. (1986:171ff.). Clearly, then, maqam Saba is not restricted to sad songs or to any specific song-type.

Of the modern-day sources surveyed for the present study, it is Muhammad (1984) who comments most consistently on extra-musical associations. Muhammad recognizes nine fundamental maqamat; for each of these she offers emotional and/or song-type associations. (She does not, however, include such comments for any of the other modes that she describes; she discusses over sixty subsidiary modes.) The following are Muhammad's comments for her nine fundamental modes. These comments are characteristic of the remarks one hears expressed, on occasion, by present-day musicians.

> Rast has the greatest clarity/distinctiveness in character ...; we hear it frequently in the chanting of the melody of the call to prayer because its melodies have gravity and dignity. (p.22)
>
> [Nahawand] has a delicate/tender sweet character which suits sentimental and sad melodies. (p.24)
>
> [Nawa Athar,] in its melodies there is a coguetry ... and an enchantment and sweetness and delicateness/tenderness ... an amorous affection. (p.25)
>
> [Bayyati] appears in most folk melodies, is heard at beginning of Quranic chanting, and at Coptic church weddings. (p.26)
>
> [Kurd,] its melodies have extreme longing; its character is delicate/tender and sweet/pleasant. (p.27)
>
> [Hijaz,] its melodies are simple and pretty; we hear it alot in pastoral melodies and the songs of camel caravans. This maqam portrays the sincerity/truth of the fascination/enchantment of the East and its beauty; it shows this in folk melodies. (p.28)
>
> Saba melodies have a delicate/tender character; in them sorrow sings with sad tender emotion expressed with sincerity in sad melodies. (p.29)

> [Sikah] is hard for the ear to discern; it appears clearly in folk melodies. (p.30)
>
> [`Ajam `Ushayran,] its melodies express strength and seriousness/gravity with sincerity. (p.31)

As is clear from the above discussion, extra-musical associations are seldom recognized on a formal level in modern Arab music theory. Rather, they are commonly left to the realm of the individual musician. Those so inclined are free to subscribe to such associations on whatever level or whatever extent he or she chooses. Most seem to limit such associations to a few general thoughts involving a number of adjectives, a few song types, and a few of the most common modes. It is possible, although rare, that an individual might develop extensive associations for a particular maqam. We close this section with one such example from the Rawdat al-Balabil (1921:162). Here Shalfun presents the most poetic description of modal ethos found in the sources for the present study: Rast is said to be "distinguished by its joyous, delightful character, by its enthusiastic tone, and by its clear, distinct and docile mode of expression. It resembles clear water flowing from uppermost polished rocks above to a surface of pure sand, beneath the rays of the sun in the heart of the day..." It also inspires "courage, pride, exaltedness," and "numbs" feelings of "cowardice, frustration, submissiveness, and shame." Later Shalfun adds, "... he who hears the mode Rast feels austere joy containing unflinching zeal, stength/vigor, and burning; as for the listener to the mode Suzdular, he feels a soft and tender joy, a joy mixed with amorous affection, tenderness, sympathy, and a burning passionate love..." (ibid.:188).

NOTES FOR CHAPTER X, SECTION P

1. Besides Mashaqah, few other modern-period writers even bother to comment on pre-modern extra-musical associations. al-Khula'i, one of the few, confirms that much of what has been written by previous authors on the subject "is not applicable in our time" (1904:81 n.1; see Racy 1977:77). He does, however, support the idea that the main maqamat each create specifics moods (see below).

2. al-Khula'i adds that the rhythmic modes also have varying effects on the listener based on whether they are fast or slow. The composer should take care to match the maqam with an appropriate rhythmic mode (1904:81). This linking of maqam and rhythm is also mentioned by Idelsohn (1913:17, 20, 58, 60). However, the idea was rejected by all of my present-day informants (see also al-Faruqi 1974:102-103; Touma 1971:39).

3. Besides these comments indicating specific moods/emotions for various maqamat, it is commonly acknowledged that each mode, after it has been played for a sufficient amount of time, comes to "dominat[e] ... over the listener, as if the listener has become haunted by it" (Racy 1988:146). When a mode comes to reign over the minds of musicians and audience alike, this state is called saltanah. All modes are capable of producing saltanah. When discussing this potential, my informants did not commonly offer specific comments about the kinds of moods/emotions the various maqamat might evoke.

See Touma's discussion of maqam and affective content (1977:56ff.)

CHAPTER XI: MODULATION

Although modulation (the practice of moving from one maqam to another within a given piece of music) is widely recognized as one of the most important aspects of Arab modal practice, the subject has been all but ignored by Arab music theorists. With few exceptions, theorists have concentrated on describing the modes as individual and distinct entities rather than discussing how one moves among the various modes. In keeping with the lack of attention, there is no universally recognized Arabic term for modulation. When discussing modulations writers and musicians rely on any of three common verbs and their verbal nouns: *yantaqil*/*intiqāl* ("to shift, change locality, to move" and "change of locality, relocation, transfer"); *yuḥawwil*/*taḥwīl* ("to transfer, change, switch" and "transformation, change, translocation, transfer"); *yughayyir*/*taghyīr* (pronounced *taghīr*) ("to change" and "change"). [1]

A. The Central Role of Modulation in Arab Music

Although the subject has not been addressed in most theoretical works, there is sufficient evidence to show that modulation has played a major role in Arab music performance throughout the modern period and even as early as the medieval period. For example, basing his discussion on thirteenth-century treatises including the *Durrat al-Taj* (c.1300), Wright describes the practice at that time: "Although a composition would generally be based on just one mode, extraneous units could also be judiciously introduced, especially in improvisatory passages displaying to the full the performer's technical prowess" (1974:498; see a similar statement in Wright 1980:519). Shiloah concludes that a group of subsidiary modes in the medieval and pre-modern practice (the <u>shu`ab</u> or <u>murakkabāt</u>) were probably "not complete or independent modes, but rather serve[d] towards the elaboration of the principal modes ..." (1981:37). Villoteau quotes from a medieval or late-medieval treatise which presents the same understanding: "As for the other [modes], many are never used... Nevertheless, one employs some of their notes in the composition of the [main modes], and they produce there an agreeable effect" (1826:68). See also Shiloah (1979:249) who describes a treatise from 1329 as containing "...advice concerning the passage from one mode to another." And finally, Wright mentions a compositional genre, apparently from the fourteenth to sixteenth centuries, called <u>kull al-nagham</u> (literally, "all of the modes") in which "a progression through different modes resulted in the inclusion of all the seventeen notes of the octave gamut" (1974:499).

Comments in the modern-period literature (from Villoteau and Mashaqah to the present-day) confirm the continued importance of modulation throughout the modern period. [2]

Villoteau writes, "Following that which we have observed in the [performance] practice [in Egypt from 1798-1801], each mode can receive ... some of the notes characteristic of other modes ..." (1826:126). He also records the existence of "rules for passing from one mode to another" (ibid.:126-27). Mashaqah ignores modulation except for the following passage: "... A melody ... [can] be in a variety of modes to the extent that ... nothing forbids the use of all the musical modes. Sometimes [a musician] begins in a mode, then moves from it to another mode [showing his] mastery of the art, then returns to [the first mode] at the final repose" ([c.1840] 1899:1081; 1913:115).

More recent comments attest to the prevalence and essential nature of modulation in the twentieth century. Rouanet, for example, writes, "It is quite rare, except in [short pieces], that all of a melody remains in only one mode" (1922:2767). A number of writers, in fact, state that changes in maqam are absolutely necessary. "If we compose a piece in [any one mode] without mixing it with others the listener would be bored" (al-Antuni 1925:3; see the same thought in al-Shawwa 1946:96). Describing the taqāsīm genre, el-Kholy remarks that "... to avoid monotony, a change of mode becomes imperative" (1978:19).

Some even argue that modulations represent the most important aesthetic moments in Arab music's modal practice. el-Kholy, for example, considers the modulatory sections of a taqāsīm to be "the climax of the [taqāsīm]," "the high point of the [taqāsīm] structure" (1979:20-21). Gerson-Kiwi writes that modulation "seems to be the vital point in the technique of maqam composition without which no artistic level could be reached." She adds, "... [I]f done well, nothing can equal the aesthetic pleasure of the listener in the detection of the smooth soldering junctions between [different maqamat]" (1970:71 and 72).

Indeed, modulation plays an important role by helping to define the structure of many compositional genres. The instrumental genres, samā'ī and bashraf, for example, have four sections (khānāt, s. khānah) which are each separated by a refrain (taslīm) (i.e., A X B X C X D X, where X is the refrain). The modal structure for these genres commonly has the first section and the refrain set in the original maqam; the second, third, and often the fourth sections are then set in different maqamat. See, for example, "samā'ī Bayyati al-Thaqil" ('Arafah and 'Ali 1978:29; Fatah Allah and Kamil 1982:105) in which the first section and taslīm are set in maqam Bayyati, while the second, third, and fourth sections are in the maqamat Rast Nawa, Hijaz, and Saba, respectively. People composing new samā'iyyāt today still follow this basic modulatory formula.

Modulations often play structural roles in vocal compositions also. In the Umm Kulthum song "Rubā'iyāt al-Khayyām" composed by Riyad al-Sinbati, for example, the dominant maqam is Rast but there are also major sections in Suznak, Bayyati Nawa, Hijaz Nawa, and Sikah/Huzam.

The importance of modulation is also recognized in statements which present modulation as one of the primary ways for a musician or composer to exhibit his intellectual and technical mastery of his art. Wright notes this function for modulation in the thirteenth century (see quote above). Discussing the present-day, Shiloah writes, "A skilled musician distinguishes himself by excelling in the modulatory progressions that allow him to move away from and back to the main maqam" (1981:40). Kamil adds that taqāsīm is considered a test of, among other things, a performer's adeptness at modulating from one maqam to another (1975:47; see also Gerson-Kiwi 1970:72).

In my own fieldwork in Cairo (including music lessons on the ʿūd and nāy), I found that musicians consistently acknowledged the central role of modulation. A number of my informants stressed this point by saying that the maqamat do not stand by themselves, isolated from one another. Rather, they exist in a state in which they "overlap each other" (i.e., they are "mutadākhilah") (personal communication, Surur 6/8/87, and Mansi Amin 6/13/87). This was especially apparent in music lessons. Lessons, each roughly an hour in length, were often devoted to a single maqam. However, after devoting the first ten minutes to phrases within the chosen maqam, my teachers commonly spent the remaining fifty minutes explaining and demonstrating modulations that could be performed from this mode. Clearly, my teachers conceptualized more about modulation than about movement within a given maqam. [3]

From these lessons, I learned that each maqam is part of a fabric that includes all the maqamat (or at least a large number of neighboring maqamat). To know any one maqam fully, the student must know all the places one can modulate to. This stands in marked contrast to the situation that exists in Indian music, where the rāgas are understood to stand "each on their own." In North Indian music, it is commonly felt that a student can learn a given rāga for three to five years and, in a sense, master it without having studied a second rāga. This is not the case in Arab music where to master one maqam is to master virtually all the maqamat.

B. Two-Fold Classifications of the Modulations Which Occur in Practice

1. Tonic vs. Non-Tonic Modulations

There are a number of concepts commonly recognized in the present day which serve to establish various two-fold classifications of the modulations that occur in contemporary practice. The most objective of these classifications compares the tonic of the original maqam with that of the new mode. Modulations are then labeled either as "tonic modulations," when the new mode shares the same tonic as the original mode, or as modulations to a degree other than the tonic. [4] There are two types of tonic modulations: those which keep the same lower tetrachord and thus remain in the same *faṣīlah* (see Chapter IX for a discussion of the concept of *faṣīlah*) and those which change the lower tetrachord and thus enter a new *faṣīlah*. [5]

examples of modes of the same faṣīlah among which tonic modulations are possible:

a.	Rast:	C	D	E-b-	F	G	A	B-b-	c	
	Suzdular:	C	D	E-b-	F	G	A	Bb	c	
	Suznak:	C	D	E-b-	F	G	Ab	B	c	
	Nirz:	C	D	E-b-	F	G	A-b-	Bb	c	
	Mahur:	C	D	E-b-	F	G	A	B	c	
	Dalanshin:	C	D	E-b-	F	G	A	B-b-	c	db
b.	Bayyati:	D	E-b-	F	G	A	Bb	c	d	
	Shuri:	D	E-b-	F	G	Ab	B	c	d	
	Bayyatayn:	D	E-b-	F	G	A-b-	Bb	c	d	
c.	Nawa Athar:	C	D	Eb	F#	G	Ab	B	c	
	Nakriz:	C	D	Eb	F#	G	A	Bb	c	
	Basandidah:	C	D	Eb	F#	G	A	B-b-	c	

examples of modes of different faṣā'il among which tonic modulations are possible:

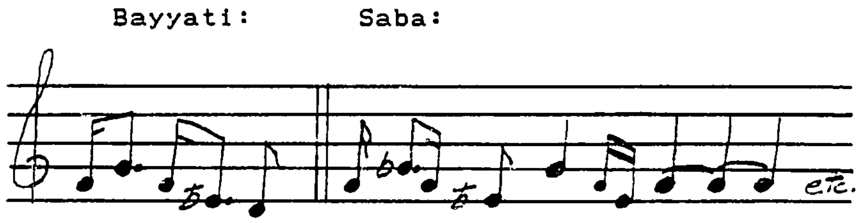
a.	Rast:	C	D	E-b-	F	G	A	B-b-	c
	Nawa Athar:	C	D	Eb	F#	G	Ab	B	c
	Nakriz:	C	D	Eb	F#	G	A	Bb	c
	Basandidah:	C	D	Eb	F#	G	A	B-b-	c
	Nahawand:	C	D	Eb	F	G	Ab	B	c
b.	Bayyati:	D	E-b-	F	G	A	Bb	c	d
	Hijaz:	D	Eb	F#	G	A	Bb	c	d
	Saba:	D	E-b-	F	Gb	A	Bb	c	db
	Kurd:	D	Eb	F	G	A	Bb	c	d

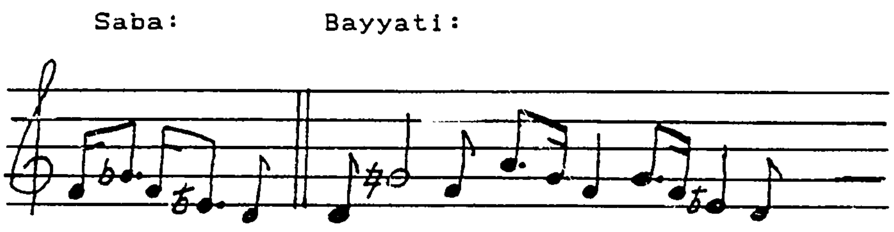
Modulations to a degree other than the tonic are most commonly to the note that starts the upper tetrachord (the _jins al-far`_). This note, called the _ghammāz_ in present-day Arab music theory, is G for most modes (for example, for Rast, Nahawand, Nawa Athar, Nakriz, Bayyati, Hijaz, Kurd, Sikah, and Huzam). For maqam `Ajam (or `Ajam `Ushayran) and Saba this note is F, while for a few C-based modes this note is either F or G (for example, for Hijaz Kar and Hijaz Kar Kurd). [6]

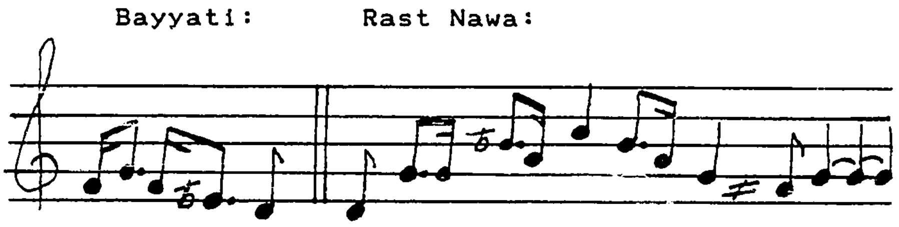
Modulations to other notes are also possible, the choice of notes being based on the degree of "compatibility" that is understood to exist between the various notes and the tonic pitch. The range of possibilities is addressed by al-Shawwa in his theory of "relative notes" (_aqārib_) (1946:96-99) and also by present-day theorists who expand the concept of _ghammāz_ to allow for _ghammāzāt_, i.e., multiple _ghammaz_s (see Chapter X, Section F, above). As some examples of _ghammāzāt_, Surur mentions the notes G, A, and E-b- for maqam Rast. By doing so, Surur accounts for modulations from Rast to Bayyati on G, Saba on A, and Sikah/Huzam on E-b-. For maqam `Ajam `Ushayran, he mentions D and F as _ghammāzāt_, thereby acknowledging modulations to Saba on D and to Hijaz on F. As for notes that are considered "incompatible," i.e., not capable of becoming the tonic note of a new mode, most of my Cairo informants mention the second and seventh degrees of a modal scale. (These notes are also omitted from al-Shawwa's aqarib.) For example, one does not modulate from the C-based maqam Rast to a mode based on D, B-b-, or Bb. [7]

2. Sudden vs. Gradual Modulations

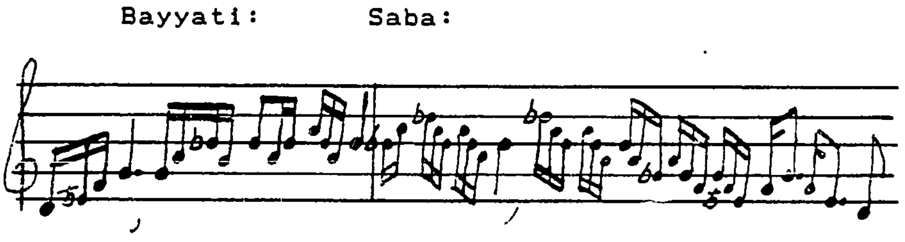
Musicians and music teachers have mentioned at least three other ways to classify the modulations. These differ from the tonic/non-tonic classification in that they all involve a degree of subjective judgement and are thus open to personal interpretation. The first, used by Jihad Racy in his classes at UCLA and by two of my 'ud teaches in Cairo, recognizes sudden versus gradual modulations. Sudden modulations tend to put important contrasting features of two maqamat in immediate juxtaposition. The new mode is usually presented directly after a cadence in the original mode. The contrasting feature of the new maqam is often contained in the new mode's lower tetrachord. Further, the contrasting feature is often arrived at by an ascending melodic leap. See, for example, the following phrases which contain sudden modulations from Bayyati to Saba, from Saba to Bayyati, and from Bayyati to Rast Nawa:

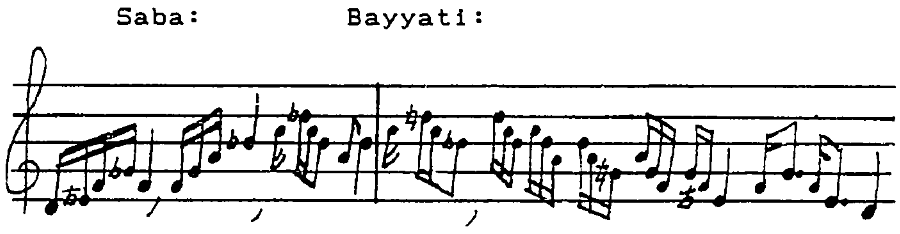


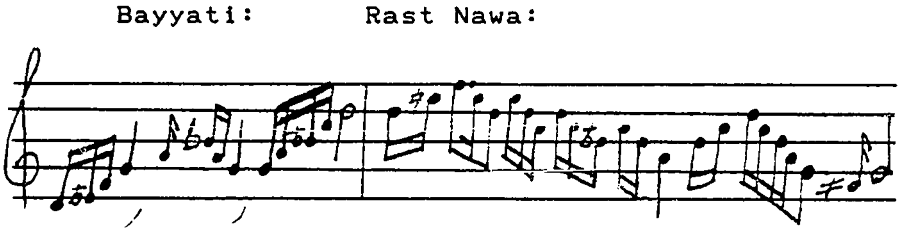




Gradual modulations, on the other hand, often occur almost inconspicuously in the middle of a phrase (rather than after a cadence). Further, such modulations often begin in the new mode's upper tetrachord. It is only when the melodic line completes a gradual descent to the lower tetrachord of the new mode that the modulation is fully confirmed (for it is the lower tetrachord which is generally understood to contain a mode's dominant character). See, for example, the following phrases which contain gradual modulations from Bayyati to Saba, from Saba to Bayyati, and from Bayyati to Rast Nawa:







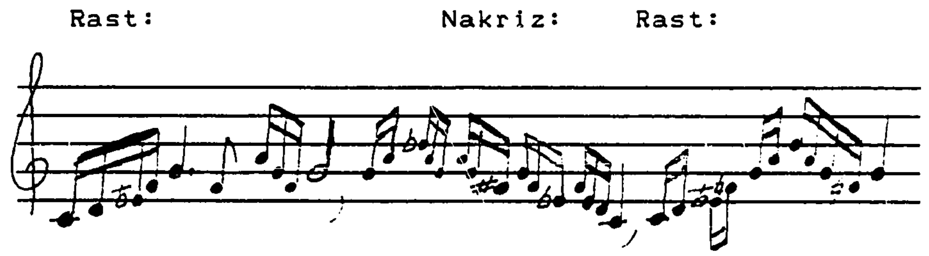
3. Passing vs. Full-Fledged Modulations

Another two-fold classification recognizes passing versus full-fledged modulations. The criteria for characterizing a given modulation in these terms include the amount of time one spends in the new mode and whether there are any major cadences in the new mode. The presence of even a single strong cadence in the new mode is usually enough for the modulation to be considered full-fledged rather than just passing. [8]

Passing modulations are commonly dismissed with the comment, "This is not a real modulation; it's just a ḥarakah," i.e., roughly "a brief movement." Recently, the European concept of "passing" modulation has been translated and adopted in academic circles. The idea is rendered in

Arabic with the adjective mururiyyah (f.) or mururī (m.), i.e., "passing"; thus ḥarakah mururiyyah ("a passing movement"), or taghyīr mururī, intiqāl mururī, and taḥwīl mururī (all meaning "passing modulation").

Passing modulations play an important role since it is often only in these brief phrases that some of the rarest and least-used modes ever appear in practice. Villoteau quotes from a pre-modern manuscript which attests to this limited use of rare modes in the past (1826:68; quoted above, this chapter). The following example contains a brief passing modulation to maqam Nakriz (C D Eb F# G A Bb c) within a Rast taqāsīm:



4. Common vs. Rare Modulations

It is also common to label specific examples of modulation as either common/typical or rare/unusual. al-Sabbagh (1950:41ff.) and 'Arafah (1976:21-22), for example, list common modulations for each of the main maqamat. After analyzing sixteen taqāsīm performances in maqam Nahawand by Jihad Racy, Nettl and Riddle find

> a distinct patterning of modulation usage. The two most commonly used maqamat are Bayyati Nawa (twelve times) and Rast (ten). Three others appear with [less] frequency... [Four others] appear only once each... The first modulation is Rast in eight of the Nahawand taqāsīm, Bayyati Nawa in six, and Hijaz in one... The conclusion regarding the improvisatory decision-making process seems obvious: a performer has in mind a typical sequence [of modulations] (but departs from it occasionally)..." (1973:19)

The most common modulations are to one or two of the most prominent modes which share the same tonic pitch (especially those which share the same lower tetrachord) and to one or two of the most prominent modes which appear (usually in transposition) based on the first note of the mode's second tetrachord. From maqam Rast, for example, the most common modulations are to Suznak and Nahawand (both based on C), to Bayyati and Hijaz, both transposed to G (i.e., Bayyati Nawa and Hijaz Nawa), and to Huzam on E-b-. From maqam Bayyati the most common modulations are to Shuri Saba, and Hijaz (all sharing the same tonic pitch), and to Rast transposed to G (i.e., Rast Nawa). [9]

Rast:	C	D	E-b-	F	G	A	B-b-		c		
Suznak:	C	D	E-b-	F	G	Ab		B	c		
Nahawand:	C	D	Eb	F	G	Ab	(Bb)	B	c		
Bayyati Nawa:					G	A-b-	Bb		c	d	eb...
Hijaz Nawa:					G	Ab		B	c	d	eb...

Bayyati:	D	E-b-	F		G		A	Bb		c		d	
Shuri:	D	E-b-	F		G	Ab			B	c		d	
Saba:	D	E-b-	F	Gb			A	Bb		c	db		
Hijaz:	D	Eb		F#	G		A	Bb		c		d	
Rast Nawa:					G		A	B-b-		c		d	e...

Rare or unusual modulations might involve unusual transpositions (such as a modulation from Rast to Sikah transposed to C), or a direct modulation between two modes that are generally perceived as being distant from one another. (One commonly moves to a distant mode by first modulating to intermediary modes which are understood to stand in a closer relationship with the original mode; this point is discussed further below.) An example of an unusual modulation to a distant mode would be a direct move from Rast to Saba Nawa. More commonly, one would first modulate from Rast to Bayyati Nawa, and then to Saba Nawa.

Rast:	C	D	E-b-	F	G	A	B-b-	c
Bayyati Nawa:					G	A-b-	Bb	c ...
Saba Nawa:					G	A-b-	Bb	cb ...

Required Modulations?

While the maqamat each have modes to which they most commonly modulate, there are no required modulations in the present day. It was, however, common in the early and middle periods of the modern era to define some individual modes as a conglomeration of two or more maqamat. These modes, then, contained obligatory shifts from one maqam to another. Mashaqah, for example, describes the mode Kardani Ghazali, "It is the performance of [the mode] Mahur ..., then you close with [the mode] Bayyati" ([c.1840] 1899:932). Similarly, D'Erlanger describes a number of compound modes which begin in one maqam and end in another (see 1949:294-95 & 298-301). D'Erlanger also mentions a number of modes which were understood to contain superimposed tetrachords. He comments that these modes can be considered as containing "...simple modulations. These modulations are, however, obligatory; they generally constitute an essential element of the mode and often serve to distinguish it from another" (1949:104). A few present-day theorists continue to mention a small number of these compound or complex maqamat. The modes Saba Zamzamah and Saba Busalik, for example, are occasionally defined as contained modulations between Saba and Kurd, and between Saba and Busalik, respectively (see, for example, Surur 1986:136-37). Similarly, maqam Zawil is sometimes mentioned and described as maqam Rast with a touch of maqam Nakriz (Surur personal communication 6/87; see also Muhammad 1984:37). Most present-day theory books, however, no longer mention such modes. [10]

There is, however, one sense in which modulations might be considered obligatory. This is when one wants to modulate to what is commonly perceived to be a distant maqam. In order to achieve such a modulation, intermediary modulations are generally considered to be necessary. The specific intermediary steps are not prescribed; however, there might be a consensus on the most common way of achieving a given modulation. Note the example cited above of a modulation from Rast to Saba Nawa via Bayyati Nawa.

It is also common for individual musicians to have their own personal approaches to a modulation between two distant modes. al-Sabbagh, for example, states (1950:49) that "the modulation [al-intiqāl] from Saba to Hijaz is not possible except after passing through [an unnamed third mode whose characteristics, he says, are between those of Saba and Hijaz]" (1950:49). As another example, one of my music teachers in Cairo stated that when modulating from maqam Shuri to Rast Nawa it is best to insert Bayyati as an intermediary mode (Amin, personal communication 6/25/84).

Shuri:	D	E-b-	F	G	Ab			B	c	d
Bayyati:	D	E-b-	F	G		A	Bb		c	d
Rast Nawa:				G		A	B-b-		c	d

C. Rules Which Govern Modulation?

For many writers and musicians there are no specific rules which govern the process of modulation. All acknowledge, however, that modulations must be guided by "good taste" (*dhūq salīm*) and musical sensitivity (see, for example, Hafiz 1971:183 and Fahmi 1965:76). It is generally agreed that the sole judge of whether a particular modulation is correct or not is the ear. If a particular modulation is criticized it is said to be "hard on the ear" (*sa`b `alá al-widn* in Egyptian dialect). [11]

While many claim that there are no specific rules, others insist that there are clear (but usually unexpressed) rules which govern proper modulation. al-Shawwa, for example, writes that modulation "has artistic rules [*qawā`id fanniyyah*] so that by adhering to them and to their conditions order and harmony result rather than disunity and lack of harmony" (1946:96). Mansi Amin, one of my Cairo music teachers, stressed this same point (personal communication, 5/30/87).

The most widely stated rule is that one must return to the original maqam (*al-maqām al-asāsī*) before ending a given piece. This is accepted by writers and musicians who otherwise say that there are no rules. Mashaqah, for example, remarks that if a piece of music "does not return [to the original mode at the end of the piece], it is a defect in the composition" ([c.1840] 1899:1081).

The second most widely acknowledged rule is based on the understanding that the modes stand in different levels of proximity to one another. The relationship between any two modes is usually expressed in terms of the adjectives "close," "closer," and "distant" (*qarīb* [*qurayyib* in Egyptian dialect], *aqrab*, and *ba'īd*, respectively). al-Sabbagh expresses the rule of relative proximity:

> ... when improvising [or composing] in whatever mode and one wants to modulate [*yantaqil*] to [another] mode ... it is necessary that one does not move suddenly from a mode to another distant [*ba'īd*] mode. Rather, one modulates from the mode to the mode which is closest [*aqrab*] to it, then one [can] modulate from this last mode to [a] mode which is close [*qarīb*] to it and in this manner one modulates step by step until one reaches a mode which is completely distant from the original mode in which one was improvising [or composing] and which, if one had modulated to it suddenly, would have created an explosion in the ears of the listeners ... After this, whenever one wants to return to the original mode, one [must] do so by the same ... process, i.e., return step by step from one mode to the mode which is the closest to it until one reaches the original mode. (1950:54)

Mansi Amin expressed the same idea, stating, "It is necessary that one knows the *qurayyib*," i.e., the maqamat which stand in close relationship with the maqam in which one is improvising or composing (personal communication, 6/25/84).

Relative proximity is based on two points; first, the degree of structural and scalar affinity between any two modes, and second, on the degree of compatibility which is understood to exist between the modes' tonic pitches. The greatest level of proximity is found between modes which share the same lower tetrachord (i.e., modes of the same *faṣīlah*). Rast and Suznak are an example of this relationship. Modes which share the same upper tetrachord but differ in their lower tetrachord are considered close, but not as close as those of the same *faṣīlah*. For example, Suznak, Huzam, and Nahawand all share a Hijaz tetrachord on G.

```
Rast:        C   D  E-b-  F   G   A  B-b-  c
Suznak:      C   D  E-b-  F   G Ab        B c
             :____________:

Suznak:      C   D  E-b-  F   G Ab        B c
Huzam:              E-b-  F   G Ab        B c    d   e-b-
Nahawand:    C   D Eb     F   G Ab        B c
                              :____________:
```

Suznak and Huzam are generally understood to stand in closer relationship to one another than Nahawand and Huzam since the former pair share the note E-b- (the tonic in Huzam, a a secondary *ghammāz* in maqam Suznak).

More important than structural or scalar similarities, however, is the degree of compatability that is understood to exist between two modes' tonic pitches. There are, for instance, a number of examples of modes which share the same notes and the same upper tetrachord but which are considered to be distant from one another because their tonic pitches are considered to be "incompatible." Such is the case with the modes Rast and Bayyati, and Suznak and Shuri, where a general "prohibition" against modulations between C-based and D-based maqamat renders these two pairs of modes entirely distant from each other. The same is true for the modes Shuri and Huzam where a "prohibition" against modulations between D-based and E-b- based maqamat renders these two modes completely distant from one another; i.e., distant in terms of modulation between the two modes. [12]

Rast	C	D	E-b-	F	G	A Bb/B-b-	c	
Bayyati:		D	E-b-	F	G	A Bb/B-b-	c	d

shared Nahawand and Rast tetra.s

Suznak:	C	D	E-b-	F	G Ab	B	c	
Shuri:		D	E-b-	F	G Ab	B	c	d

shared tetra.

Shuri:	D	E-b-	F	G Ab	B	c	d	
Huzam:		E-b-	F	G Ab	B	c	d	e-b-

shared tetra.

Pivot Notes: The Door to a Modulation

It is somewhat common for musicians, when demonstrating modulations, to pinpoint one or two specific notes from which they begin a given modulation. One music teacher referred to these notes informally as "the door" (al-bāb) to a modulation (Amin, personal communication, on numerous occasions in 1982-83, 1984, and 1987). Traditional Arab music theory does not, however, recognize either this concept or the phenomenon as a whole.

For modulations among many of the D-based modes (Bayyati, Saba, Kurd, and Hijaz) and 'Ajam 'Ushayran (based on BBb), Bb often serves as this pivot note. When composing or improvising, one can modulate among these modes by first focusing on this Bb using the note A as a leading tone to the

Bb: then, by descending with Bb A G F E-b- D, one has shifted to maqam Bayyati; by descending Bb A Gb F E-b- D, one has moved to Saba; Bb A G F Eb D C BBb and one has entered maqam 'Ajam 'Ushayran; etc.

Bayyati:			D	E-b-	F		G	A	Bb	c		d
Saba:			D	E-b-	F	Gb		A	Bb	c	db	
Kurd:			D	Eb	F		G	A	Bb	c		d
Hijaz:			D	Eb		F#	G	A	Bb	c		d
'Ajam 'Ushayran	BBb	C	D	Eb	F		G	A	Bb			

In modulations between two modes which have dissimilar tetrachords based on the same note, the pivot note is often one of the two notes which define the boundaries of the dissimilar tetrachords. For example, modulations from Rast to Bayyati Nawa often use either G or c as a pivot note. (Maqam Rast has either a Rast or Nahawand tetrachord on G; Bayyati Nawa has a Bayyati tetrachord on G.) A number of musicians indicated that one can first hold the note c within maqam Rast and then modulate to Bayyati Nawa. For example: G A B-b- c - c - c ... Bb c d c Bb c -, Bb c Bb A-b- G...

Rast:	C	D	E-b-	F	G	A	Bb/B-b-	c	
Bayyati Nawa:					G	A-b-	Bb	c	d eb...

By indicating such pivot notes, musicians are not limiting or restricting the ways a particular modulation can be achieved. Rather, they are pinpointing specific strategies they use for achieving modulations which are "acceptable to the ear." [13] (For other examples of pivot notes, see the examples of gradual modulations given above: The note db begins the gradual modulation from Bayyati to Saba; d begins the shift from Saba to Bayyati; and the note e begins the gradual modulation from Bayyati to Rast Nawa.)

After fieldwork in 1798-1801, Villoteau reported finding rules for modulation based on a concept akin to pivotal tetrachords:

> In Arab music, as in ours, there are rules for passing from one mode to another, of which the principle is to always announce by some preparatory notes which prepare the ear for the change of the [mode] which is about to take place. This preparation consists chiefly of the interlinking of the notes of the [tetrachord] where ... one wants to make the transition, with those of the analagous and corresponding [tetrachord] of the mode in which one wants to enter. In this manner one can pass successively among all the modes, and return to that from where one has come without offending the ear. (1826:126-27)

D. A New Classification of the Modulations that Occur in Modern-Day Arab Music

When considering whether or not one can modulate between any two modes, the single most important factor is tonic compatibility. The concept of tonic compatability has at its basis the commonly held classification of the maqamat according to tonic pitch. In this system of classification the main maqamat fall into one of five different groups: [14]

the C maqamat: Rast
Suznak
Nahawand
Hijaz Kar
Hijaz Kar Kurd
Nawa Athar
Nakriz

the D maqamat: Bayyati
Shuri
Saba
Kurd
Hijaz
Shahnaz

the E-b- maqamat: Sikah
Huzam

the F maqam: Jaharkah

the BBb maqam: ‘Ajam ‘Ushayran

Modulatory practice has a grammar which is based, in part, on each of the above maqam groups acting as discrete entities. Membership in one or the other of the above "families" tends to determine the possible modulations to and from a given maqam, the overriding factor being tonic compatability. Using these "families" of maqamat as a point of departure, I present four rules in the following pages which explain the vast majority of the modulations that occur in modern-day practice. These are the rules for: 1) tonic modulations; 2) modulations between the two primary families, the C and D maqamat; 3) modulations to and from the E-b- and Bb maqamat; and 4) modulations to the F maqam(at). These rules are based on the teachings I received from Jihad Racy in the U.S. and from numerous teachers in Cairo. It is also based on extensive analysis of pieces in the modern repertoire.

The repertoire I am referring to includes both the "musically learned" and the "popular" domains. The former is represented by the samā'ī and bashraf genres, the latter by the modern song tradition (including the songs of Umm Kulthum, Muhammad 'Abd al-Wahhab, Farid al-Atrash, 'Abd al-Halim Hafiz, Wardah, etc.). [15] Modulation in the "musically learned" and "popular" domains of Arab music have, it seems, been governed by the same body of rules since the second half of the nineteenth century and possibly earlier (there are few surviving pieces from before the second half of the nineteenth century). At the end of this chapter the modulatory grammar that exists in this music is contrasted with the grammar that prevails in folk music domains.

1. Tonic Modulations: The first rule can be stated:

> Modulation occurs freely among maqamat which share the same tonic

Thus, if you are in a D maqam, you can modulate to any other D maqam; if you are in a C maqam, you can modulate to any other C maqam; etc. [16] Tonic modulations might make up as much as 50% of the modulations found in Arab music. "Samā'ī Bayyātī al-Thaqīl," discussed earlier, provides examples of modulations from Bayyati to Hijaz and Saba, all three being D maqamat.

2. Modulation Between the Two Primary Families

A review of the maqamat listed above reveals that the C and D families make up the main portion of the maqam system. Modulation between these two families is restricted by the following rule:

> you can not modulate from a C-based maqam to a D-based maqam or vice versa.

It would seem then that the two families are mutually exclusive. However, this is where transposition comes into play:

> If you want to modulate from a C maqam to any D maqam, you must transpose the D maqam to G, and modulate to the transposed maqam. Similarly, if you want to modulate from a D maqam to any C maqam, you must transpose the C maqam, also to G, and modulate to the transposed maqam.

An example of this latter situation occurs in "Samā'ī Bayyātī al-Thaqīl" where maqam Rast is transposed to G.

3. Modulation to the E-b- and BBb Maqamat

a) The E-b- maqamat are treated as if they were members of the C family. Thus:

> Modulations between the C and the E-b- maqamat occur freely as if they were simple tonic modulations.

See, for example, "al-Amal" by Umm Kulthum (Sono Cairo cassette 76006), the first verse of which contains a direct modulation from Rast to Huzam.

> Modulations between the D and E-b- maqamat require the same transpositions as modulations between the C and D maqamat: either the D maqamat are transposed to G, (as stated in rule #2 above) or the E-b- maqamat are transposed to B-b- (or BB-b-).

The latter point is explained as follows: Sikah and Huzam normally starts a neutral third above C; after transposition it would start a neutral 3rd above G, i.e., B-b-:

Rast on C:	C D E-b- F G . . .
its Sikah/Huzam:	E-b- F G . . .
Bayyati on D:	D E-b- F G . . .
its Rast on G:	G A B-b- c d . . .
its Sikah/Huzam:	B-b- c d . . .

See, for example, the introduction to the Umm Kulthum song, "Wa Marrat al-Ayyām," which contains a modulation from Bayyati to Huzam transposed to BB-b- (this mode is often called Rahat al-Arwah). Another Umm Kulthum song, "Inta `Umrī," contains a similar modulation transposed down a fourth, i.e., from Kurd on AA to Huzam on F=/=. (This is an example of a full-system shift; see the Chapter X, Section M, where this point is discussed).

b) The BBb maqamat are treated as if they were members of the D family. Thus:

> Modulations from the D maqamat to 'Ajam 'Ushayran, the main BBb maqam, occur freely as if they were simple tonic modulations. Modulations from the C maqamat, however, require that 'Ajam 'Ushayran be transposed to Eb (or possibly to C).

'Ajam 'Ushayran's transposition to Eb is explained as follows: this mode normally starts a major third below D; after transposition it would start a major third below G, i.e., Eb. This transposition occurs only rarely. If 'Ajam 'Ushayran is transposed to C, then it can be introduced as a tonic modulation from Rast.

Bayyati:			D	E-b-	F	G	A	Bb	c	d	
its 'Ajam:	BBb	C	D	Eb	F	G	A	Bb			
Rast on C:		C	D	E-b-	F	G	A	Bb			
its Bayyati:						G	A-b-	Bb	c	d	eb...
its 'Ajam:				Eb	F	G	Ab	Bb	c	d	eb

The above three rules probably account for more than 90% of the modulations that occur in modern-day Arab music.

4. Modulation to the F Family of Maqamat

A review of the above patterns of modulation and transposition reveals that the maqam system revolves primarily around two series of axes. The first is C E-b- G (and Eb). This is because the C and E-b- modes act as one family by freely accepting modulations from each other and by both requiring that the D modes by transposed to G and the BBb modes be transposed to Eb. The second is D G Bb (and BB-b-/B-b-). This is because the D and BBb modes also act as one family by freely accepting modulations from each other and by requiring that the C modes be transposed to G and the E-b- modes be transposed to B-b- (or BB-b-).

These two systems of axes have the note G in common. G's role is explained, in part, by two factors. First, as noted above (see Chapter X, Section D and above in this chapter), G is the base note of the upper tetrachord (the *ghammāz*) for most C, D, and E-b- modes. This is because most C maqamat are perceived as being made up of disjunct tetrachords (C - F and G - c), most D maqamat are conceptualized as containing conjunct tetrachords (D - G and G - c), and the E-b- maqamat are seen as being formed by an initial trichord followed by a conjunct tetrachord (E-b- - G and G - c). Thus their second tetrachords all start on G. When this situation is combined with a second factor, namely, that non-tonic modulations most commonly occur on the first note of a mode's second tetrachord, then G is rendered an extremely important note in the realm of modulation. [17]

How then do the F maqam(at) fit into the maqam system, for they seem to be excluded from the two sets of axes mentioned above? F modes interact with the other modes in one of three ways. First, they can appear in modulations from the BBb modes since BBb modes are commonly analyzed as having a second tetrachord that starts on F (i.e., BBb - Eb and F - Bb). There are, however, few pieces based in the BBb modes (of which only 'Ajam 'Ushayran is commonly mentioned). A second way that F modes appear is when F is treated as a secondary *ghammāz* within C- or D-based maqamat. Thus, one might modulate from Bayyati or Rast to Jaharkah, the main F maqam. This possibility also occurs only rarely. A third link between the F modes and the rest of the maqamat is provided by two C maqamat which function, at times, as if built from conjunct instead of disjunct tetrachords (i.e., C - F and F - Bb). During such moments, these modes (Hijaz Kar Kurd and Hijaz Kar) accept modulations to the F maqamat and also to some of the C maqamat transposed to F. [18] See, for example, the Umm Kulthum song, "'Awadt 'Ayni," which contains modulations from Hijaz Kar Kurd to Rast on F and Nahawand on F.

The preceeding discussion codifies modulatory practice in both the "musically learned" and "popular" domains. There is, however, a conflicting practice within Egyptian folk music, specifically in the *madīḥ al-nabī* (or *madḥ*) and *mizmār/ṭabl baladī* traditions which are performed at saints-day festivals (*mawālid*; s. *mawlid*, pronounced *mūlid*) and at numerous other occasions where folk entertainment is required (weddings, birthdays, etc.). *Madḥ* is also performed at folk zikrs. In these performances an uninterrupted suite of mawāwīl (s. mawwāl) and other vocal genres commonly start with the C maqamat (using any number of the C maqamat), then move up the scale to the D maqamat (again using any number of these maqamat), and then close with the E-b- maqamat. See, for example, a performance by Shaykh Farid Hagag (Sahrah fī Madḥ al-Rusūl, Sawt al-Hilal cassette) which contains modulations from C to D and from D to E-b- modes.

This stepwise progression up the scale is not allowed in the more "mainstream" traditions, i.e., in the "musically learned" and "popular" domains. Having found a tradition which does not follow the restrictions discussed above, we can now view these restrictions in a new light. The restrictions are obviously not inherent to the maqam system. Rather, it can be argued that they are an attempt to create a more refined, a more highly evolved modal system, one that stands in contrast to traditions found in (at least some of) the region's folk musics.

NOTES FOR CHAPTER XI

1. Powers (1980:426 and 427) states that the process of changing from one scale type to another is called *tarkib* (see also Pacholcyzk 1980:523). This word was used as a musical term prior to the modern period. However, it is not a recognized term in the modern period.

2. The question is often raised whether modulation is more common today than in the past. Unfortunately, the sources used for the present study do not offer any evidence which supports an answer one way or the other. The system of levers (*ʿurab*) which were applied to the *qānūn* in the first decades of the twentieth century (see Chapter IV, Section B.2), thereby greatly facilitating the execution of modulations on this instrument, remains the major evidence in support of the idea that modulation is more prevalent in the twentieth century than it has been in the past.

3. When I arrived in Cairo I expected to focus on how musicians conceptualize melodic movement within the individual modes. However, besides for the general ascending progression mentioned above (see Chapter X, Section J), my teachers offered little instruction about movement within a given mode. When I felt I had exhausted the possibilities for learning about conceptualization within a maqam, I began to ask about modulation. The reaction to my new focus was remarkable: my teachers seemed to let out huge sighs of relief. One of my *ʿūd* teachers, George Michel, summed up the general feeling: "Ah, now *this* I can help you with. Yes, *this* is my business" (10/13/82). Indeed, for the rest of my time in Cairo, maqam lessons with Michel and a number of other teachers focused primarily on modulation.

4. In classes at UCLA, Jihad Racy refers to these as "tonic" and "relative" modulations, respectively. See Nettl and Riddle 1973:18 where Racy's two-fold classification is mentioned.

5. al-Shawwa used the word *faṣīlah* to refer a group of modes which shares the same tonic, irrespective of the structure of the modes' lower tetrachord; this usage predates the present-day understanding of the term. Thus, when al-Shawwa writes that modulation is permitted among maqamat of the same *faṣīlah*, he gives as examples modulations from maqam Rast to Suzdular, Suznak, Nahawand, and Nawa Athar, all C-based modes (1946:98).

Fahmi refers to modes which share the same tonic as *aqārib* ("relatives")(1965:76). He adds that one can modulate freely among *aqārib*. He acknowledges that he has borrowed this term from the Western concept of "relative" keys.

6. Surur defines ghammāz as "a note from which you change either the tetrachord [jins] or the maqam" (personal communication 6/18/87). See similar definitions in Surur 1987:117 and Muhammad 1984:21.

7. A few present-day theorists, seeking to develop a "scientific" approach to discussions of modulation (scientific but not empirically based), have allowed the possibility of modulations to every degree of a given mode's scale, including the second and seventh. See, for example, Shurah (1984) who admits modulations from the C-based maqam Rast to a number of D-based maqamat. Surur (personal communication 5/19/87) also holds that there are no restrictions regarding modulation to a given mode's various scalar degrees. He does, however, recognize that modes based on D and B-b- stand in a "distant" relationship with maqam Rast, whereas modes based on G, E-b-, and A stand in a "close" relationship. (The concepts of "close" and "distant" modes are discussed below.) See also Gerson-Kiwi who writes about maqam Rast that "every intervallic degree belonging to Rast [can develop] into a nearly independent maqam centre propelling out of its root additional side-maqamat" (1974:72).

8. It is not necessary that the complete octave scale of the new mode be used for the modulation to be considered full-fledged. A modulation from Rast to Bayyati Nawa (G A-b- Bb c d eb f g), for example, might give only the notes F G A-b- Bb and c of the latter mode (see Powers 1980:425). Signell discusses passing modulations with respect to Turkish music practice (1977:77ff.).

9. Modulations to Bayyati and Rast (whether in root position or transposed to G) are common for most maqamat. al-Sabbagh, for example, comments that maqam Bayyati is a prominent maqam which enters into all the other modes (1950:47).

10. al-Sabbagh speaks against the continued recognition of such compound or complex modes; see quote on p.685 above.

11. Villoteau found this to be the case in Egypt in 1798-1801. He reports that modulations must be performed "without offending the ear" (1826:127).

12. My presentation of the concept of "tonic incompatibility" is based on teachings I received in Cairo from George Michel, Mansi Amin, and numerous other scholars and musicians. There is, however, no indigenous term for this concept.

Amin, one of my teachers who stated that modulations are not possible between C- and D-based modes, allowed two exceptions. He allowed modulations from the C-based Nawa

Athar and Nakriz to D-based modes and vice versa. This, he explained, is because of the strong presence of a Hijaz tetrachord on D in these two C-based modes (personal communication, 6/20/87). Others denied these exceptions, in part, by refusing to recognize the existence of this Hijaz tetrachord; i.e., they acknowledge only a Nawa Athar/Nakriz pentachord in these modes.

```
Nawa Athar:  C   D Eb      F# G Ab     B c
Nakriz:      C   D Eb      F# G   A Bb   c
             ¦                ¦
             ¦_a pentachord__ ¦
                 ¦_ _?_?_?_ _¦
```

13. Gerson-Kiwi notes the function of pivot notes when she writes that related modes have "a few identical degrees of their modal scales which serve as a platform for mutual excursions. The [*taqāsīm*] player ... has to seize such a narrow bridge of common notes as a starting point for the transfer to a melodically related *maqam*" (1970:71).

14. See Chapter IX for further discussion of this classification system. Maqamat based on GG (such as Farahfaza, Shatt 'Araban, and Yakah) and AA (Bayyati 'Ushayran, etc.) are not included here as they are seldom played in the present day. BB-b- maqamat such as 'Iraq and Rahat al-Arwah are treated here as transpositions of E-b- maqamat.

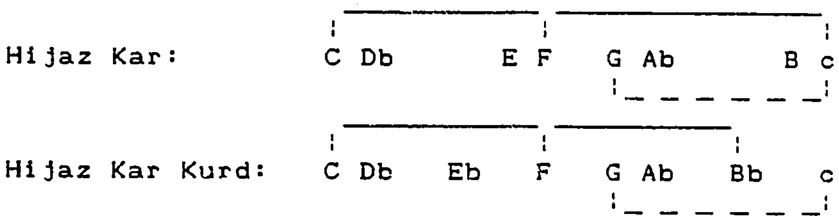
15. Racy (1981:12 and 1982:391) refers to the latter as the "central domain": "This music is ... known even among non-Arabs as the dominant style of "Arab music."

16. See note 5 above.

Racy offers two exceptions to this rule of unrestrained tonic modulations (personal communication 3/86). The cases of Hijaz Kar and Hijaz Kar Kurd, two C-based modes, are discussed below in the rule #4.

17. Even maqam Saba, whose tetrachordal structure differs from the norm for D-based modes (it has Gb instead of G and is commonly analyzed as D E-b- F Gb + F Gb A Bb ...), functions as the other D maqamat in terms of modulation: it accepts the C maqamat by transposing them to G (for example, Saba to Rast Nawa).

18. During such moments, Hijaz Kar would be analyzed as containing a Hijaz tetrachord on C followed by a conjunct Nawa Athar/Nakriz pentachord on F. Hijaz Kar Kurd would be analyzed as having a Kurd tetrachord on C followed by a conjunct Nahawand tetrachord on F.



CHAPTER XII: CONCLUSION

With few exceptions, studies of modern Arab music theory both in the Middle East and the West have focused on the theory that existed at the time each study was conducted. Writers have given their attention to summarizing and, in many cases, advancing the contemporary theory (from Mashaqah who describes the modal theory at the beginning of the nineteenth century, to al-Khula'i at the turn of the century, D'Erlanger writing in c.1930, Salah al-Din in 1950, and Muhammad and Surur in the 1980s). Because of their synchronic focus, existing studies have not addressed the issue of change within modern Arab music theory. [1] With its diachronic focus, the present study offers an in-depth analysis of the changes that have occurred in Arab music theory within the modern period.

Arab music theory has undergone phenomenal changes over the last 200 or so years, not only in form and content but also in the position the theory has occupied in Arab society. At the beginning of the modern period music was considered a degrading pastime. Music theory was neglected as an intellectual discipline. By the turn of the century, music and music theory became a respectable interest for new, literate, and well-to-do segments of Arab society. A prevailing pro-Western bias began to affect the form and content of both music and music theory, which, by the 1930s, came to be considered essential components of a proper general education. Music theory thus changed from being the concern of a small specialized elite to being a subject taught in virtually every secondary school throughout the Middle East. In its new socio-cultural context a new type of music theory was needed, one that could be easily taught and readily comprehended.

In Part One of the dissertation, focusing on the notes, two main issues emerge. First, while the modern period began with the identification of twenty-four notes per octave in a system of Arabic/Persian note names, this indigenous system was largely supplanted by a version of Western solfege and Western staff notation. In conjunction with other developments, this change affected the character of Arab music in substantial ways. A previously oral tradition became a written tradition. An overall aesthetic which favored heterophony gave way to a new aesthetic that favored unisons and parallel octaves. An indigenous sense of the "natural scale" now coexists with the Western understanding of what constitutes the natural scale. Elements of Western music culture can now be seen in many aspects of Arab music and Arab music theory.

A second issue that emerges deals with tuning and intonation. According to early-eighteenth-century Syrian scholars, the quarter-tone scale was developed with the understanding that the quarter-step intervals were equal in size. While a majority of modern-period theorists and performers have tended to ignore this point, a number of twentieth-century theorists raised the question anew, "Is the Arab scale an equal-tempered scale?" Among those who championed the tempered scale in Cairo in the first part of this century, many were influenced by a perception that Western music's tempered scale represented an evolutionary stage to which Arab music should aspire. Others, especially a group of Syrian theorists, proposed alternate theories which maintained that the Arab scale was not tempered. In the light of evidence from the present-day realm of performance, including standard tuning and fingering practices for the `ūd and instances of variant intonation expressed by musicians, the quarter-tone scale is best viewed as a referential scale which musicians are free to interprete in their own way, in response to various aesthetic and acoustic considerations.

In Part Two, on melodic intervals and tetrachords, the main points that arise are first, that the melodic intervals were newly codified and simplified in the twentieth century, and second, that tetrachordal theory, which had played an important role in medieval Arab theory but was ignored in the nineteenth- and early twentieth-century sources, had to be reintroduced into modern Arab music theory. Over the last sixty years, the role of tetrachordal theory has grown to such an extent that tetrachordal analysis (in conjunction with scalar analysis) is now the dominant method of describing the melodic modes. The new emphasis on tetrachordal theory fostered the development of new terminology for naming the various kinds of tetrachords found in modern-day Arab music and led to a new system of modal classification (the faṣīlah system). Here, then, we find that modern theory has drawn not only from elements of Western music theory but also from elements of medieval Arab theory.

In Part Three, on the modes, analysis of the elements used to define the individual maqamat reveals that the concept of mode has changed drastically in the modern period. The period is best subdivided into three subperiods, "early," "middle," and "present-day." The early period was characterized by the absence of tetrachordal and scalar analysis. The modes, described in terms of the new system of Arabic/Persian note names, were presented as melody types. The diverse ranges and unique melodic features of the various modes show that the goal of early-period maqam presentations was the description of practice rather than the formulation of a systematic, standardized theory.

Middle-period theory was characterized by the introduction of scalar and tetrachordal analyses and by many levels of complexity which have since disappeared from both theory and practice, including specific starting notes for each mode, predetermined paths that one should follow in the performance of each mode, and a predilection for modes that do not duplicate at the octave. While there was much emphasis on the description of modal practice (middle-period theory described the music practice of the late-nineteenth and early-twentieth centuries), there was also strong emphasis on establishing a new systematic theory, one built on "proper scientific bases." This was, in part, a response to a perception in the first half of the twentieth century that Arab music was in peril. A modernization of the music and music theory was considered essential to ensure its continued survival. Western music, it was felt, had successfully evolved to a point where it had ensured its own continued vitality; Arab music and Arab music theory should modernize along Western lines. Of the various attitudes and concepts that Arab theorists and educators proceeded to adopt, the most influential for the Arab concept of mode was Western scalar theory (modes were presented as containing scales of uniform ambitus) and a Western approach to music pedagogy.

The present-day period is characterized by a desire for simplification and consolidation. Now taught to masses of secondary school students and thousands at music conservatories, music theory had to assume a form which was appropriate for its new institutionalized setting. A new standardized and simplified theory was formulated, based, to a large extent, on models found in Western music theory. The middle period's two-octave scales were reduced to single octaves which duplicate at the octave. The middle period's often complex tetrachordal analyses were discarded in favor of modes composed of only two tetrachords. Starting notes were omitted. All mention of how the modes move in performance was eliminated. In addition, present-day discussions of the Arab modes use Western staff notation, now an integral part of Arab music and music theory.

While the goal of the present-day theory was undoubtedly the revival of Arab music and the dissemination of this music among new generations of Arab youth, the simplified theory inadvertently affected the music it was designed to promote. Over the last fifty years, conservatory training became a minimum requirement for anyone seeking a music career. Thus, roughly the last two generations of Arab musicians have learned only the new theory, including new simplified definitions of the maqamat. Present-day musicians do not know about a number of features that were essential aspects of the middle-period modes (including starting notes, prescribed paths for the melodic unfolding of each mode, and numerous instances of non-duplicating scales). As performers' concepts about the maqamat have changed, so the performance practice has also changed. For example, descending modes, a common feature of early- and middle-period theory, are no longer recognized by a vast majority of present-day performers; these modes are now commonly rendered with ascending progressions. It is the theorists and music educators who have been primarily responsible for these changes.

In Part Four, on modulation, the main point to emerge is that, although the subject is largely ignored by modern theorists, the rules and common patterns of modulation can be successfully codified to a large extent. For example, modulation occurs freely among the C and E-b- modes and among the D and BBb modes; however, modulation between these two sets of modes requires that one set be transposed.

In the remaining portion of this chapter I would like to look at a variety of broad issues concerning music theory, including the goals of a music theory, different types of theory, sources of patronage, and periods of relative activity and inactivity. Evidence from a variety of music cultures will be considered.

Minimally, it can be said that there are three types of music theory, i.e., three different perspectives with which theorists can approach the general subject. As will be shown, the different perspectives are not mutually exclusive. They can be labeled descriptive, prescriptive and speculative. The first two tend to emphasize the intimate link between theory and practice, while the third often highlights the essential separateness of the two endeavors.

First of all, a music theory might be concerned primarily with the description of music practice. Assuming this emphasis, the modal theorist must make a number of basic decisions. While a transcription of a specific piece of music might present the clearest description of the modal and melodic content of that piece, the modal theorist is usually concerned with abstracting the general features of a mode, i.e., not confined to a single rendition. Thus, he seeks a kind of average containing features found in all or most typical renditions of a mode. In performing this task, the theorist must decide how comprehensive a description to present. Does one offer a single characteristic phrase for each mode or attempt a representation of a more lengthy unfolding of each mode. Many of Mashaqah's maqam descriptions fit the former approach as does the *pakar* of North Indian music. The latter approach is seen in the Turkish *seyir* and North Indian *svar prastār*.

Prescriptive theories differ in intent by seeking to establish authoritative rules for the student to follow. Again the issue of detail is an important one. Extreme detail is found in Persian *radīf* transcriptions. However, because of the institutionalized nature and large number of students involved in many modern-day learning situations, theorists often choose less detailed abstractions of a mode's features, such as scale and tetrachords in Arab theory or the *āroh*/*avaroh* *vādī*/*samvādī* complex of North Indian music (i.e., identifying ascending and descending scales and the most important and second most important notes for each mode).

Speculative theory tends to differ from the above approaches by using ideas outside the realm of practice as the basis for developing new theories. The idea might come from the realm of theory itself; this was the case with Venkatamakhi's 72 parent scales (melas) in South Indian music. The music practice in Venkatamakhi's day (the seventeenth century) used only some 19 scales (Greig 1987:28). Venkatamakhi decided not to be bound by the confines of practice (previously, Ramamatya, writing in 1550, had chosen the descriptive approach and stopped at describing the 20 parent scales prevalent in his day; ibid.:351); rather, he set out to determine all the scales which one could possibly build assuming the general rules of intervallic combinations prevalent at that time. The medieval 17-tone and the modern 24-tone general scales of Arab music are other examples of speculative theories built on ideas born in the realm of music theory. Speculative theory might also come from outside the realm of music. For example, pre-modern Arab and Indian theory contained numerous extra-musical associations according to which notes and modes were related to the planets, to different humours, to seasons, etc. In the Indian rāgamālā tradition, rāgas were personified and then described and depicted in verse and miniature paintings. In addition, theories, especially classification systems, are often informed by such considerations as mathematical logic or symmetry rather than by empirical data from the realm of practice (see Powers 1980a:428).

The overlapping nature of these three categories is abundantly clear when we find Venkatamakhi's speculative scales subsequently used prescriptively as the basis for new compositions: there are now compositions in all 72 scales. In similar fashion, a student can use descriptive presentations as models for his improvisations or compositions when he first learns a new mode. It is also possible for a prescriptive theory to assume a descriptive quality. This has occurred in modern-day Arab music where generation after generation of musicians have learned only the present-day period's prescriptive theory: in time they came to reformulate their practice along new lines suggested by the theory; note the absence of descending modes in the present day both in theory and in performers' understandings of taqāsīm performance (see Chapter X., Section J).

The distinct nature of the fields of music theory and practice is brought to the fore by the fact that theories around the world commonly choose to ignore aspects of the performance practice with which they are aligned. Modern Arab theory, for example, ignores the issue of modulation and the many instances of variant intonation valued by Arab musicians. (From an analysis of performers' comments, it has been possible to present guidelines which govern modulatory practice and also to summarize performers' ideas on variant intonation; see Chapters XI and IV, respectively.) Indian theory does not consider the types of rhythmic improvisations which occur in the gat sections of instrumental performances, i.e., kinds of tāns and toras. In such cases, theory and practice act as two separate entities with theorists and performers being content to follow each their own traditions. The music theorist, for example, might consider it more important to follow an existing theoretical tradition rather than deviate from this tradition in the interest of more closely reflecting the contemporary performance practice. This has been true in India where, for centuries, theorists continued to incorporate the concept of śrutis into their writings even though the concept had long lost relevance to contemporary practice.

Theorists are not the only ones who might disregard aspects of the performance practice. There are numerous examples where both performers and theorists fail to recognize aspects of the prevailing practice on a conscious and explicit level. In Arab music, neither theorists nor performers explicitly conceptualize about accidentals, characteristic melodic ambitus for the various modes in performance, or the use of cliche phrases. In Indian music culture, the omnipresent drone in Indian practice is so taken for granted that there is no word for drone in either Sanskrit or modern North Indian languages.

To summarize this first point, music theories are not exclusively descriptive, prescriptive, or speculative. They are neither completely united nor completely separated from the practice with which they are aligned. Rather each music theory establishes its own unique balance of the three approaches and its own degree of uniformity with the performing practice. The levels of each which exist at any given time are not permanent features of a music culture. On the contrary, levels can change as new influences come to affect the music tradition. Arab music theory, for example, was characterized by a predominantly speculative bent prior to the modern period. By the beginning of the modern period this speculative element had been put aside; the modal theory at that time had a prevailing descriptive character. Today, the modal theory is unquestionably prescriptive in nature. Similarly, if a music theory becomes too disassociated from the music practice, then inevitably a theorist or group of theorists will come forth and, citing the prevailing descrepancy between the two traditions, set about to realign theory with practice. Note just such a statement of purpose by the Indian theorist, Ramamatya (cited in Greig 1987:352).

Among the changes which have affected numerous music theories throughout the world have been shifts in sources of patronage, in audiences for the music theory, and in the learning process for new theorists. In previous centuries, theorists were often patronized by royalty, the nobility, or members of the aristocracy. Safi al-Din (d.1294), for example, wrote his Risalat al-Sharafiyyah for Sharaf al-Din Hartun. The Ottoman sultan, Selim III (r.1789-1807), commissioned a new form of music notation and numerous new melodic modes (Signell 1977:2; Walter Feldman, personal communication 12/87). Mashaqah wrote his al-Risalah al-Shihabiyyah for Amir Muhammad Faris Shihab. In India, the Man Kutuhal, the Lahjat-i Sikandar Shahi, and the Svara Mela Kalanidhi are but a few examples of the many treatises which resulted from royal patronage. In the twentieth century, theorists around the world came to be patronized by newly established educational institutions or cultural divisions of modern national governments. In the Middle East, Salah al-Din, al-Hilu, Qasis, Fahmi, Muhammad, and Surur were or are presently employed in government supported music institutes. al-Hifni and Shawqi were employed by the Ministry of Culture. In India, most present-day theorists are employed either by universities or by such government-supported organizations as the Sangeet Natak Akademi.

Patronage is never assured, whether the source be royalty or modern civic administrations. A new king, for example, might decide to stop or lessen prior levels of patronage, either because he is more interested in another art form (say, painting or dance as opposed to music), because he is too involved in waging wars or other pressing matters, or because he is religiously or philosophically opposed to supporting music and music theory. The latter is said to have been the case in India in the late-seventeenth century during the reign of Aurangzeb. Similarly, modern civic patronage offers no sure haven from extreme changes in levels of support. In Turkey, music developed during the Ottoman empire was banished from modern conservatories during the first half of the twentieth century (Signell 1977:8). Likewise, governments in modern-day Iran, Pakistan, and Yemen have, at different times, withdrawn support for specific types of music.

The shift to public support has been accompanied by a change in the intended audience of the music theories. Previously, a treatise would have been read, perhaps, by the patron, by interesting courtiers, nobility, and members of the aristocracy, and by a few independent scholars, students, and interested musicians. Today's institutionalized contexts offer new categories of readers. While interested musicians, a few members of well-to-do classes, and independent scholars remain among the readers, the audience is now comprised predominantly of students and teachers at the new institutes. The new audience has tended to have a simplifying affect on the theory in many cultures, since a majority of the students are not music specialists but rather are receiving a broad based liberal arts education. The affect on the present-day concept of maqam is documented in this work. In India, Bhatkhande's ten thāṭs (parent scales) can be seen as a simplification for the sake of the new classes of students of music and music theory.

Now that theory is taught in institutionalized settings, today's theorists are the products of these settings. This represents a change in the learning process for theorists. In Turkey, for example, Yekta, Ezgi, and Arel all received their practical and theoretical training from master musicians at the turn of the century (Signell ibid.:7). Later generations of Turkish theorists have all had institutionalized learning. Previously, theorists learned whatever their teacher imparted. Today, students learn an assigned curriculum.

This raises the issue of an "official" music theory. Literate cultures have all had major theorists who have written seminal works which shaped the thinking of subsequent generations of scholars. In the Middle East, al-Kindi (d.874), al-Farabi (d.950), and Safi al-Din (d.1293) were such figures; in India, Bharata (c.200) and Sarangadeva (early 13th c.) have been most prominent. Thus, the idea of an "official" theory is not without precedent. But surely the process of sanctioning an "official" theory that occurs in the present day is of a different type. In Egypt music educators have sought to have the same theory taught at schools throughout the country. In India, there is a music organization which gives examinations nationwide. Called the Gandharva Mahavidyalaya, it establishes a standardized curriculum and standardized exams which their representatives administer in cities and towns throughout the country (Jairazbhoy, personal communication 8/89). This level of standardization is surely unprecedented.

Another interesting feature of music theories is the occurrence of periods of relative activity and inactivity. Wright reports that the latter half of the thirteenth century was one of the most important times for Arab and Persian music theory. Works during this period contained a significant degree of originality and provided the framework for theoretical thinking during the following centuries (1978:1). Signell comments that following the years of activity by Yekta, Ezgi, and Arel, Turkish music theory "has fallen into an almost somnolent state... [S]tudents have made a few efforts to prolong the impetus and vigor of those times, but the spark seems to be dying" (1977:8-9). It seems that every culture has had seminal works in different periods of their history, works which signal periods of heightened activity in theoretical thinking. In India, for example, note the treatises by Bharata, Sarangadeva, Ramamatya (1550), Venkatamakhi (17th c.), and Bhatkhande (early 20th c.).

Shiloah (1981) cautions, however, against the labeling of certain periods as periods of stagnation. Specifically, he disproves a widely accepted belief that there was a decline in theoretical activity in the Arab world between the thirteenth and nineteenth centuries; he did so by unearthing a large number of treatises from these centuries in various European and U.S. libraries. While it might be best to refrain from labeling different periods as years of stagnation, one can clearly document the rise and decline of specific theoretical approaches and emphases. In the Arab world, it seems that the scalar theories of Safi al-Din reigned for a number of centuries and were not supersceded until the formulation of the quartertone scale, probably in the eighteenth century. As far as the formal written intonational theory is concerned, then, it seems that we can safely recognize periods of heightened activity and periods when the issue was either neglected or was not the subject of original thinking. In the intervening centuries theory focused on other issues, especially cosmological associations. This concern itself began to decline in the eighteenth and nineteenth centuries. A similar waxing and waning of extra-musical associations occurred in India over roughly the same time period. These shifts are seen in the different modal classification systems that prevailed during these centuries. In the late medieval period in both India and the Middle East, modal classification systems were often based on extra-musical associations rather than on musicological factors. (Indian _rāgamālā_ classifications recognized six male _rāga_s, each of which had a number of female counterparts [_rāginī_s] for wives and a number of male ragas for sons.) In the modern day, such classification systems would not be accepted; today, modes are classified according to musicological criteria such as shared scalar features.

Another important aspect of theory is that it can respond to new external cultural influences. When the Arab world began to study works of ancient Greek scholars in the eighth and ninth centuries, Arab music theorists were profoundly affected. They saw in the ancient Greek theory models of both rationality and spirituality which they immediately sought to emulate. Intonational studies with strong Pythagorean biases became commonplace as did Greek inspired considerations of modal ethos. Connections between music, philosophy, and science were also brought to the fore. Later, in the nineteenth and twentieth centuries, the Middle East came to view the West as offering new models of vitality, modernity, and rationality. Musicians and theorists partook of many elements of Western music culture which they felt contributed to the West's advanced state, including musical instruments, staff notation, and numerous theoretical concepts.

As has undoubtedly been the case in many such situations of cultural borrowings, much of the adopted material came to be used for different purposes and was imbued with fresh meanings in the new cultural setting. The example of equal temperament is a case in point: in the West, equal temperament was a functional construct, developed in response to specific problems raised by European harmonic practice. For many in twentieth-century Egypt, equal temperament became a celebrated and much desired idea for different reasons. It became a symbol of modernity and forward thinking despite the fact that Arab modal practice presented no specific problems for which equal temperament was the answer. (For example, no one was performing Arab music transposed to all twenty-four quarter steps.) The same can be said of the recent adoption of many elements of Western scalar theory. The new simplified scalar definitions of the modes (single-octave scales devoid of any comments on the specifics of melody formation) fit well into the institutional settings in which music has come to be taught. However, these simplified definitions have served a purpose beyond their immediate pedagogical function: the new concept of mode has significant levels of symbolic meaning. Simplified, standardized, and systematized, the present-day theory stands as a symbol of modernity in a fast-changing world.

This brings us to question the future of Arab music theory. Will the new simplified theory remain the dominant theory? Will the Western model lose its appeal in time? Here we note that the ancient Greek model is no longer revered as it was in the past. If, in the future, the European model loses its appeal in Egypt and other Middle Eastern countries, then it is possible that the trends of simplification and standardization that the model had helped foster will be replaced, perhaps, by a return to levels of greater complexity. Surely, using the simplified theory as a base, new generations of theorists could reintroduce a number of levels of complexity that have been discarded over the past fifty years, not necessarily using the same forms as existed in the past, but perhaps using new and as yet unconsidered constructions. Only the future will provide answers to these questions.

NOTE FOR THE CONCLUSION

1. Notable exceptions include Elsner's work (1973) on changes in twentieth-century Egyptian theory and Shawqi's review (1969) of scalar studies since 1894. Surur (1986) compares the present-day theory with medieval theory and thus avoids addressing the issue of change within the modern period.

APPENDIX 1

"THE ARAB SCALE," AS RECORDED BY LABORDE (1780:437)

The Arab Scale	The European Scale of Equal Semitones
Rasd	ut
nim zergoula	
zergoula	ut # & re b
tik zergoula	
Douga	re
nim Kurd	
Kurd	re # & mi b
Seiga	
nim poussalek	mi
poussalek	
Charga	fa
arba	
hegeas	fa # & sol b
tik hegeas	
Naoua	sol
nim heussar	
heussar	sol # & la b
tik heussar	
Husseinin	la
nim ageam	
ageam	la # & si b
Aouch	
nim neuft	si
neuft	
Maour	ut

Laborde's presentation of E natural and B natural as "nim Busalik" and "nim Nahuft," respectively, follows a common tradition which is discussed in Chapter II. The names Arba ('Arba') for F=/= and Maour (Mahur) for c are alternate names found in a number of later sources including Mashaqah ([c.1840] 1899:632), Ronzevalle (1899:298), and al-Hilu (1972:69). In the present day, these two notes are called nim Hijaz and Kirdan, respectively.

APPENDIX 2

ALTERNATE NAMES AND SPELLINGS FOR THE 48 + 1 NOTES

N.B. 1. Many theorists give alternative names for a number of the notes; these are indicated by the word "or".
2. The following includes only the approach which recognizes Busalik as E natural and Mahur as B natural (see Chapter II); variations that result from Busalik as E=/= and Mahur as B=/= are not included.
3. nim and tik are commonly spelled with either long or short vowels, i.e., nim or nīm, tik or tīk.

	Common name	Variant Name(s)
GG	YAKĀH	qab al-Nawa (Vill. 1826:128) Yakkāh (Mashaqah 1899:298) Yak kāh (al-Shawwa 1946:10)
- GG=/=	- qarār nīm Ḥiṣār	qabā nīm Ḥiṣār (Ronzevalle 1899:298 w/ short final a; al-Khula'i 1904:32; Raghib in al-Khula'i 1904:32v; Dhakir in al-Khula'i 1904:33; Farah 1974:76) (NB: Mashaqah 1899:632 uses "qarar")
- AAb	- qarār Ḥiṣār	qabā Ḥiṣār (same sources as for qabā nīm Ḥisār, plus D'Erlanger 1933:184 and Salah al-Din 1950:93)
- AA-b-	- qarār tīk Ḥiṣār	qabā tīk Ḥiṣār (same as above) qabā tīk Ḥiṣār or Shūrī (al-Khula'i 1904:32; Raghib in al-Khula'i 1904:32v; Farah 1974:76)
AA	'USHAYRĀN	qab al-'Ushayrān (Villoteau 1826:128) 'Ushayrān al-Ḥusaynī (D'Erlanger 1933:182ff.; Qasis n.d.:178)

- AA=/=	- nīm ʿAjam ʿUshayrān	qarār nīm ʿAjam (Mashaqah 1899:632; al-Hifni 1946:164) qaba nīm ʿAjam (Ronzevalle 1899:298)
- BBb	- ʿAjam ʿUshayrān	qarār ʿAjam (Mashaqah 1899:632; al-Hifni c.1946:164) or qarār ʿAjam (Qasis n.d.:180) qaba ʿAjam(Ronzevalle 1899:298) ʿUshayrān al-ʿAjam (D'Erlanger 1933:186ff.)
BB-b-	ʿIRĀQ	qab al-ʿIrāq (Vill. 1826:128)
- BB	- Kawasht	or Nihuft or Nuhuft (al-Khulaʿi 1904:32; Farah 1974:76) or Rahāwī (Raghib in al-Khulaʿi 1904:32v) or Sūzdul (al-Hifni c.1946:164) Jawasht (unknown source in al-Khulaʿi 1904:40v; Mashʿal 1979:8)
- BB=/=	- tīk Kawasht	tik Jawasht (same sources as for Jawasht above) Gavasht (D'Erlanger 1949:18)
C	RĀST	Rast (Mashaqah 1899:219; Ronzevalle 1899:298) Rasd (Mustafa 1887:250) Rāsit (al-Hifni c.1946:164)
- C=/=	- nīm Zirkūlāh	(with short or long i) nim Zirgūlah (D'Erl. 1949:20)
- C#	- Zirkūlāh	(with short or long i) Zirgūlah (D'Erlanger 1949:18) or Zinkulāh (Shihab al-Din [1840] 1892:14-15)
- D-b-	- tīk Zirkūlah	(with short or long i) tik Zirgūlah (D'Erl. 1949:20)

D	DŪKĀH	-
- D=/=	- nīm Kurd	nim Kurdī (common) nim Kūrd(ī) (al-Shawwa 1946:11; Surur p.c. 5/24/87) or Nahāwand (al-Khula'i 1904:31; Raghib in al-Khula'i 1904:32v)
- Eb	- Kurd	Kurdī (common) or Kūrd(ī) (al-Shawwa 1946:11; Surur p.c. 5/24/87)
E-b-	SĪKĀH	Thīh kāh (al-Shawwa 1946:10)
- E	- Būsalik	Busalīk (common) or 'Ushāq ('Ushshāq) (Shihab al-Din [1840] 1892:14; al-Khula'i 1904:31; Raghib in al-Khula'i 1904:32v; Farah 1974:76)
- E=/=	- tīk Būsalik	-
F	JAHĀRKĀH	Gārkāh (Dhakir in al-Khula'i 1904:33) Geharkah (Recueil 1934:600)
- F=/=	- nīm Ḥijāz	Arba (Laborde 1780:437) or 'Arbā' (Mashaqah 1899:632,868; Ronzevalle 1899:298; al-Hifni c.1946:165; al-Hilu 1972:69)
- F#/Gb	- Ḥijāz	or Hujāz (al-Kurdi p.c. 6/21/87) or Ṣabā (al-Hifni c.1946:165; al-Hilu 1972:69) Ṣabā, when it is Gb (Qasis n.d.:180; Mash'al 1983:58; Muhammad 1984:11) or 'Uzzāl (Qasis n.d.:180) or 'Arbā' (Fakhuri n.d.:53)

- G-b-	- tīk Ḥijāz	or Ṣabā (al-Khula`i 1904:31; Raghib in al-Khula`i 1904:32v) or `Uzzāl (al-Hifni c.1946:165)
G	NAWĀ	spelled w/ final aliph or final y Nawāh (Qatr 1968:4; al-Shawwa 1946:10; Mash`al 1983:55)
- G=/=	- nīm Ḥiṣār	-
- Ab	- Ḥiṣār	or Shūrī (al-Hilu 1972:69i; Fakhuri n.d.:158)
- A-b-	- tīk Ḥiṣār	or Shūrī (al-Khula`i 1904:31; Farah 1974:77)
A	ḤUSAYNĪ	-
- A=/=	- nīm `Ajam	nim `Ajam Ḥusaynī (D'Erl.1949:20)
- Bb	- `Ajam	`Ajam Ḥusaynī (D'Erl. 1949:18) or Nīrz (Niruz/Nayrz) (Shihab al-Din [1840] 1892:14; al-Khula`i 1904:31; al-Hifni c.1946:164; al-Hilu 1972:69)
B-b-	AWJ	Awīj (Dhakir in al-Khula`i 1904:33) `Irāq (Villoteau 1828:125: Moustapha 1887:250) `Irāqī or Awj (Shihab al-Din [1840] 1892:12) `Irāq or Awj (D'Erlanger 1949:12 & 18; <u>Recueil</u> 1934:600-603) or Awg (al-Sabbagh 1950:36; Mash`al 1979:8)

- B	- Māhūr	Nihuft or Nahaft (Shihab al-Din [1840] 1892:14; Mashaqah 1899:632; Ronzevalle 1899:298; D'Erlanger 1949:18; al-Hilu 1972:69; Fakhuri n.d.:158) nim Neuft (Laborde 1780:437) or Nihuft/Nuhaft (al-Khula`i 1904:31) (D'Erlanger: Nihuft; al-Hilu: Nahaft, p.70)
- B=/=	- tīk Māhūr	tīk Nihuft (or Nahaft) (same sources as Nihuft above)
c	KIRDĀN	Māhūr (Laborde 1780:437; Mashaqah 1840:632; Ronzevalle 1899:298) Kardān (D'Erl.1949:12)(N.B.: the initial vowel is not indicated in standard Arabic orthography)
- c=/=	- nīm Shahnāz	w/ long or short first "a" vowel spelled w/ ẓ. (Mashaqah 1840:632; Ronzevalle 1899:298) or Kanāz (al-Hifni c.1946:164; al-Hilu 1974:69)
- c#	- Shahnāz	w/ long or short first "a" vowel spelled w/ ẓ. (same as above)
- d-b-	- tīk Shahnāz	w/ long or short first "a" vowel spelled w/ ẓ. (same as above)
d	MUḤAYYAR	or jawāb Re (Mash`al 1979:8)
- d=/=	- nīm Sinbulah	nim Sunbulah (D'Erlanger 1949:20; al-Kurdi p.c., 6/21/87) nim Zawāl (Ronzevalle 1899:298; al-Hilu 1972:69) or nim Zawāl (al-Hifni c.1946:165; Fakhuri n.d.:158)

- eb	- Sinbulah	Sunbulah (D'Erlanger 1949:20; al-Kurdi p.c., 6/21/87) or jawāb Kurd (D'Erl.1933:182ff.) or Zawāl (Ronzevalle 1899:298; al-Hifni c.1946:165; al-Hilu 1972:69; Fakhuri n.d.:158)
e-b-	BUZRAK	or Buzurk or Buzruk (Ronzevalle 1899:219) Buzurg (D'Erlanger 1 9:18) jawāb Sīkāh (Shihab al-Din [1840] 1892:13; Rawdat al-Balabil 1921:160; Mahfuz 1964:318ff.) or jawāb Sīkāh (al-Khula'i 1904:29,32; D'Erl.1933:182ff.; al-Sabbagh 1950:36; al-Hifni c.1946:165; Farah 1974:77; Mash'al 1979:8; Fakhuri n.d.:158; Qasis n.d.:178; Mash'al 1983:58) tīz Sīkāh (Dhakir in al-Khula'i 1904:33)
- e	- jawāb Būsalik	Ḥusaynī Shadd (Mashaqah 1840:632; Ronzevalle 1899:298; al-Hilu 1972:69; N.B. al-'Attar had jawab Busalik: c.1820 in Shiloah 1979:66) or Ḥusaynī Shadd (al-Hifni c.1946:165; Fakhuri n.d.:158) or jawāb 'Ushāq (al-Khula'i 1904:32; Farah 1974:77) tīz Būsalik (Dhakir in al-Khula'i 1904:33)
- e=/=	- jawāb tīk Būsalik	tīk Ḥusaynī Shadd (Mashaqah 1899:632; Ronzevalle 1899:298; al-Hilu 1972:69) or tik Ḥusaynī Shadd (al-Hifni c.1946:165; Fakhuri n.d.:158)

f	MĀHŪRĀN	or jawāb Jahārkāh (al-Khula`i 1904:29,32; D'Erl.1933:182ff.; al-Sabbagh 1950:36; Farah 1974:77; Mash`al 1979:8; Fakhuri n.d.:158; Qasis n.d.:178; Mash`al 1983:58) jawāb Jahārkāh (Rawdat al-Balabil 1921:160; Mahfuz 1963:268ff.; Kamil 1975:69; implied in Shihab al-Din [1840] 1892:13) tīz Gārkāh (Dhakir in al-Khula`i 1904:33)
- f=/=	- jawāb nīm Ḥijāz	-
- f#	- jawāb Ḥijāz	tīz Ḥijāz (Dhakir in al-Khula`i 1904:33)
- g-b-	- jawāb tīk Ḥijāz	-
g	JAWĀB NAWĀ	or Ramal Tūtī (Mashaqah 1840:632; al-Khula`i 1904:29,32; al-Sabbagh 1950:36; al-Hilu 1972:69; Farah 1974:77; Qasis n.d.:178) or Saham (al-Shawwa 1946:12; Mash`al 1983:58; Mahfuz 1963:268ff.; Qatr 1968:4) Ramal Tutti (Ronzevalle 1899:298; D'Erlanger 1949:18) Saham (Rida and al-Hifni 1934:23; Fahmi 1965:31; `Arafah & `Ali 1978:15; `Iffat c.1980:14; Muhammad 1984:12; this is the name presently used in Cairo music institutes) tīz Nawā (Dhakir in al-Khula`i 1904:33) only jawāb Nawā (Rawdat al-Balabil 1921:160; D'Erlanger 1933:182ff.; Fakhuri n.d.:158; Mash`al 1979:8; implied in Shihab al-Din [1840] 1892:13)

(see notes on next page)

Note:

- See the discussions on alternate names for the fundamental notes and the `arabāt/anṣāf in Chapter II.
- The above list, with but a few exceptions, does not include variant spellings found in works written in European languages.
- Two Syrian musicians, `Ali Darwish (in D'Erlanger 1949:29) and al-Sabbagh (1950:173), give a number of radically different note names which are not included in this list. `Ali Darwish applies the nīm and tīk prefix to fundamental note names (for example, nim `Iraq, tik Rast, tik Dukah); this is not found in any of our other sources. al-Sabbagh's use of `ālī (high) and wāṭī (low) to label notes is discussed in Appendix 6.
- See the discussion in Chapter III on the extent that these Arabic/Persian note names are known and used in the present day.
- See Appendix 3 on pronunciation in the Egyptian dialect.

APPENDIX 3

PRONUNCIATION IN THE EGYPTIAN DIALECT

Peculiarities of the Egyptian dialect bring about at least three significant changes in the pronunciation of note names. First, the "j" of the Arabic language is rendered by "g". Thus, *ʿAjam* becomes *ʿAgam*, *jawāb* becomes *gawāb*, and *Hijāz* might be rendered *Higāz*.

Second, The "q" of the Arabic language is usually rendered by a glottal stop, equivalent to the Arabic letter *hamzah* (notated in transliteration by an apostrophe). Thus *ʿIrāq* becomes *ʿIrā'*; *qarār* becomes *'arar*; *maqām* becomes *ma'ām*. The change from "q" to a "hamza" is occasionally accompanied by a change in the pronunciation of the neighboring vowels. For example, the vowels in "maqām" are pronounced like the "a" in "Amish"; however, the vowels in "ma'ām" are pronounced like the "a" in "amorous".

Third, the vowels "ū" and "u" (long and short) are occasionally rendered by a long "o," as found in the English word "home." (There is no "o" vowel in standard Arabic.) Thus *Dūkāh* might be pronounced *Dokāh*, *Zirkūlāh* might be become *Zirkolāh*, and *Higāz* (see above), which some in Cairo spell with a "u" (*Ḥugāz*), might be rendered *Ḥogāz*. This explains the occurrence of the letter "o" in a number of European language transliterations (see Moustapha 1887:258; Arian 1924:164; and Spector 1970:246).

A special case of a deviant Egyptian pronunciation concerns the name, Jaharkah. The "j" changes to "g" as expected, thus one possible pronunciation is *Gahārkāh*. However, two other changes commonly occur: the first vowel is changed to "i" and the second syllable is dropped. This results in the word *Girkāh*. This is not a recent phenomenon: Villoteau gave this note as "Girkeh", based on his fieldwork in Egypt in 1798-1800 (he also spelled Ḥijāz as "Hogaz"; 1826:128 & 130).

APPENDIX 4

MASHĀQAH'S MANNER OF PRESENTING THE MODES

Mashāqah gives the following for a mode he calls Dūkāh or 'Ushāq al-Atrāk but which, he says, most Syrian scholars called Bayyātī:

> It is from Dūkāh Rast Dūkāh Rast three times, then Nawá Jahārkāh Sīkāh Dūkāh Dūkāh Dūkāh Rast Dūkāh, then it rises step by step to the note Ḥusaynī distinctly, then 'Ajam, then Nawá and Janārkāh, the two distinctly, then Sīkāh Dūkāh. (Mashāqah [c.1840] 1899:883)

In other words, D C D C three times, then G F E-b- D D D C D, then E-b- - F - G - A -, then Bb, then G and F distinctly, then E-b- D.

For maqam Rast, Mashāqah writes:

> It sounds the note Rast, then Dūkāh and in this fashion ascends to Nawá, then it returns to Rast, then strikes Yakāh and stops on Rast. (1913:90)

That is, C, D ascending to G, then it returns to C, then GG, and then it ends on C. There is a disagreement regarding the reading of the note name Yakāh in this passage. While Ronzevalle (1913:90) and Smith (1847:186) give this note as Yakāh (GG), Ronzevalle gives it as Sīkāh in two other places in his writings (1899:729 and 1913:37). As the descent to Yakāh is considered a common feature in maqam Rāst in middle-period writings (see D'Erlanger 1933:227; al-Ḥilū [1961] 1972:107) and even in the present day according to some, I am inclined to favor this reading.

APPENDIX 5

WAS THE 1932 CONGRESS FOR OR AGAINST THE EQUAL-TEMPERED SCALE?

When the members of the 1932 Congress met in Cairo, they were divided up into a number of separate committees in order to facilitate in-depth study of various issues. The Committee on the Musical Scale was asked to undertake experiments to determine the exact pitches and intervals in both the general (24-tone) and the fundamental (7-tone) Arab scales. The result, it was hoped, could serve as a "model scale to which musicians would refer when they would have a difference of opinion on the subject of the exact intonation to attribute to such and such a degree, to such and such a melodic interval" (D'Erlanger 1949:43). The committee's efforts were soon stymied, however, by a disagreement over the placement of the half-flats, specifically, E-b- and B-b-, the Egyptians wanting a lower position for these pitches than the Turks and Syrians were willing to allow. Finally, a separate Egyptian subcommittee was appointed to carry out the requested experiments (ibid.:43-44).

D'Erlanger describes how the committee's experiments were carried out:

> Instead of having each of the musicians individually perform various pieces in some of the different modes and having them make prolonged enough stops on various notes of the scale so that [these notes] could be measured on the sonometer, the subcommittee preferred to proceed otherwise, in a fashion which we believe was less scientific. This was to play successively to all the musicians assembled together the various notes of the scale determined by [the Egyptian theorist] Amin al-Dik, noting each time the opinion expressed by each musician, then to attribute to each note a number which was the average of all those which had been recorded. One was thus inevitably forced to raise the intonation of certain pitches and to lower that of some others ... (D'Erlanger 1949:44)

The committee's report in the Congress publication gives a second account of the committee's activities:

> Mustafa Rida Bey was asked to furnish on his qānūn the musical intervals which were to be measured. Mr. Mahmud 'Ali Fadli adjusted the sonometer and [specially assigned] arbitrators judged the unisons. The string of the sonometer was of one meter and was of gut in order to avoid differences

> in timbre [evidently the *qānūn* strings were also of gut]. The tuning of the open string was verified before each measurement Seven long sessions were devoted to this meticulous work. The measurement of certain intervals were repeated more than ten times, and that in different modes. The seven intervals of the fundamental scale were measured directly. Some of the small intervals were also measured. As for the others, the musicians having unanimously affirmed to us that they are equal to those intervals already measured. we were content to calculate them. The numbers represent the length in millimeters of the vibrating part and are the averages of the experiments. (*Recueil* 1934:595)

The results of the subcommittee's experiments regarding the fundamental scale are given in the first two columns of the following table (from *Recueil* 1934:600). I have provided the last two columns.

	sonometer readings	cents	eq. temp.	deviation from eq. temp.
Rast	1000.0	0	0	
Dokah	891.0	199.8	200	0.2 cents
Sikah	817.5	348.9	350	1.1
Geharkah	750	498.0	500	2.
Nawa	666.6	702	700	2.
Husseini	594.0	901.8	900	1.8
Irak	545	1050.8	1050	0.8

When analyzing the Congress' figures we must keep in mind D'Erlanger's comments that the experiments were not conducted in a scientific manner. The practice of averaging the various results was obviously ill-advised. A similar assessment appeared even within the Congress publication itself. The "General Report of the Committee of the Musical Scale" (the committee was chaired by Collangettes) includes the statement, "we next proceeded with some measuements of intervals. From a scientific point of view, they were dubious" (*Recueil* 1934:595).

However, taken as they stand, the results are remarkable for how closely they approximate the figures of an equal-tempered quarter-tone scale, deviating by two cents or less in every case.

After establishing the fundamental scale, the subcommittee then set about to define the remaining 17 notes in the general scale. A quick glance at the resulting scale (see table below) reveals that most of the 17 additional notes differ significantly from their equal-tempered counterparts: 11 of the 17 are "off" by between 7.4 and 10.7 cents. On closer examination, however, this is not the total forsaking of the equal-tempered system as it first seems. As noted in the Congress quote above, some of the remaining notes were measured in aural tests while others were derived mathematically as their intervals were "unanimously affirmed [to be] equal to those intervals already measured" (Recueil 1934:595). The additional tested notes, four in number, were found to differ substantially from their equal-tempered equivalents (see below). When these four notes were used to derive other notes, then their deviations from equal temperament were passed on to other notes, even though the intervals which were used to derive the other notes were themselves often tempered (see summary diagram below). For example, Eb was given a value of 292.6 cents, 7.4 cents below the equal tempered position (closely approximating the Pythagorean minor third of 294.1 cents). From this Eb, the note Db was derived following the assumption that the interval Eb to D was the same as the interval Db to C (ibid.:601). As D and C were determined to be at a near-tempered interval of 199.8 cents, Db and Eb were now separated by the same interval. Thus, though derived, in part, from this near-tempered interval, the Db came to have the same position relative to equal temperament that the Eb had: Db was given the value of 92.8 cents, 7.2 cents below the equal tempered position (nearly identical with the Pythagorean minor second of 90.2 cents).

The Eb's deviation from equal temperament, having been passed on to the Db, was then passed on to four other pitches in similar fashion: D=/= was derived from the Db by the following reasoning: "the interval between [D=/=] and [Db] [three quarter-steps] equals the interval between [D] and [E-b-]" (ibid.:601). Here again, we have a near tempered interval (D to E-b- was defined as 149 cents) applied to a non-tempered starting point (92.8) resulting in another non-tempered note (D=/= came to be 241.9 cents. E natural was then derived from the D=/=, and finally F=/= was derived from the E as both these intervals (D=/= to E and E to F=/=), it was agreed, were equal to the same D to E-b- interval of 149 cents: E came to be 391 cents [1]; F=/= came to be 540 cents. Going back to the original Eb, E=/= was then derived by the application of the same 149 cent interval (E=/= came to be 441.6 cents.

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[1] From the perspective of Western intonation studies, this is a truly bizarre method for deriving the supposedly consonant interval, C to E: first C to Eb, then Eb to Db, then Db to D=/=, and finally D=/= to E.

In this way, all the derived notes were arrived at by the application of near-tempered intervals to one or another of the 11 (7 + 4) tuned notes. If the near-tempered interval was added to one of the seven Rast notes, then a near-tempered note resulted (as with C=/=, D-b-, G-b-, and A-b-). When the tempered interval was added to one of the four non-tempered notes, then the result was an additional non-tempered note.

Besides Eb, the other three tested notes were Bb, Ab, and B. [2] Bb was given the value of 1009.9, 9.9 cents above the equal-tempered position (between the Pythagorean 996.1 and the just 1017.6): this deviation was passed on to B=/= by the application of the same D to E-b- interval of 149 cents. Ab was given the value of 797.1 cents, 2.9 cents below the equal-tempered position: this deviation was passed on to A=/= by application of the same 149 cent interval. B was given the value of 1092.4, 7.3 cents below the equal-tempered position: this deviation was passed on to F# by transposing it down a near-tempered fourth of 502.3 cents .

Closer analysis thus reveals that although many notes of the Egyptian subcommittee's general scale deviate from the equal-tempered positions, there is an underlining coherency which is provided by near equal-tempered intervals: 11 of the 13 derived notes were arrived at by the transposition of the D to E-b- interval of 149 cents; the other two (Db and F#) were derived by the application of intervals of 199 and 502.3 cents, respectively (see diagram below).

Collangettes, president of the Committee on the Musical Scale, was obviously not impressed with this ambivalent stance towards equal temperament. Still adhering to his own anti-temperament ideas expressed in 1904 (see Chapter IV, Section A.3), he tried to press the issue and clarify the musicians' stance. He asked, within the Egyptian subcommittee, that the qanun be tuned "to the Rast mode using the scale of 24 equal quarter tones to the octave so as to ask the professional musicians if this mode so tuned suited them, asking everyone to specify the notes which they found too high or too low" (Recueil 1934:602). This experiment sought to answer one of the Organizing Committee's questions: "If the octave were divided into 24 equal intervals, resulting from a constant ratio, would the sonority of the maqamat be altered to the point that the modes would lose their individual characters?" (ibid.:596). In the subsequent report of the Committee on the Musical Scale, Collangette was, no doubt, happy to report that the members of the subcommittee found that the tempered scale "did not conform" to the scale of Egyptian music and thus "it was necessary to reject the tempered scale" (ibid.). However, a review of the actual comments which were elicited by the above mentioned experiment reveals a somewhat different result. In response to the tempered scale, one member "approved this tuning without reservation, while the others declared unanimously the Sikah and Awj [here called `Iraq] to be a little high, and the majority [declared] that the Nawa was too sharp" (ibid.:602).

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[2] Eb, Ab, and Bb were tested as they occur in maqam Nahawand while B natural is stated to have been tested as it occurs in maqam Hijaz (Recueil 1934:601). Since the note B does not occur in Hijaz, neither today nor as the mode is described in the 1932 Congress maqam lists (see ibid.:296 and 565), it is assumed that the B is the third note of maqam Hijaz transposed to G.

By comparing these comments with the Rast scale already provided by the subcommittee's earlier experiments we find that the musicians' stance regarding equal temperament remains ambiguous. On the one hand, three tempered notes (D,F, and A) are accepted. On the other hand, Sikah at 350 is called objectionable even though it is only 1.1 cents above the subcommittee's previously determined position. Finally, the comments regarding the notes Nawa and Awj are outright contradictary for here 700 and 1050 are called too high whereas the subcommittee had previously determined the positions of these two notes to be even higher (albeit only slightly). This last experiment thus serves to verify the "dubious" nature of the subcommittee's work. Nevertheless, it is possible to conclude that, though there were elements of deviation from the equal-tempered scale, the scales arrived at by the members of the subcommittee had stong equal-tempered characteristics.

	s-comm.'s earlier scale	dev. from eq. temp.	eq. temp.	comments re. eq.-temp. scale
Rast	0	0	0	
Dokah	199.8	- 1.2	200	OK
Sikah	348.9	- 1.1	350	too high
Geharkah	498.0	- 2.	500	OK
Nawa	702	+ 2.	700	too sharp
Husseini	901.8	+ 1.8	900	OK
Awj	1050.8	+ .8	1050	too high

Still another example of the Congress' ambiguous stance toward equal temperament appears in the Committee on the Musical Scale's report. While stressing that there were "irreconcilable differences" on the subject of equal temperament, the report states that the members of the committee were content to support a notation system based on quarter tones, including symbols for raising and lowering a given tone by one quarter, one half, and three quarters of a tone (ibid.:596-598). Thus it seems clear that the tempered quarter-tone system reigned as the dominant conceptual scheme despite the existing objections. [3]

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3. The Congress report is one of the few sources to admit the phenomenon of pitch variability: Concerning deviations in the numbers obtained during intonation experiments, the comment was made that such deviations "are inherent to the physiology of the ear, as to the physiology of the eye and of the other organs. All the experiments of biological physics present analogous deviations...." (Recueil 1934:596).

The General Scale Established by the Egyptian Subcommittee at the 1932 Congress

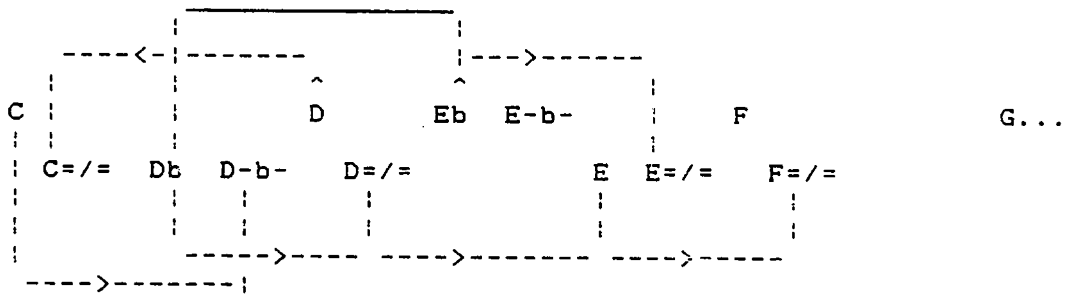
(after Recueil 1934:602 and D'Erlanger 1949:42)

notes	string length in mm.s	cents values of pitches	deviation from equal temp.
C	1000	0	0
C=/=	971.2	51.1	1.1
Db	947.8	92.6	7.4
D-b-	917.5	148.9	1.1
D	891.0	199.7	.3
D=/=	869.6	241.8	8.2
Eb	844.5	292.5	7.5
	838.0	305.9	5.9
E-b-	817.5	348.7	1.3
E	797.8	390.9	9.1
E=/=	774.8	441.6	8.4
F	750.0	498.0	2
F=/=	732.0	540.0	10.
F#	711.1	590.1	9.9
G-b-	688.1	647.0	3.
G	666.6	702.0	2.
G=/=	652.4	739.3	10.7
Ab	631.0	797.0	3.
	627.0	808.0	8.
A-b-	611.6	851.3	1.3
A	594.0	901.7	1.7
A=/=	578.9	945.5	4.5
Bb	558.0	1009.9	9.9
B-b-	545.0	1050.8	0.8
B	532.0	1092.4	7.6
B=/=	512.0	1158.9	8.9
c	500.0	1200.0	0

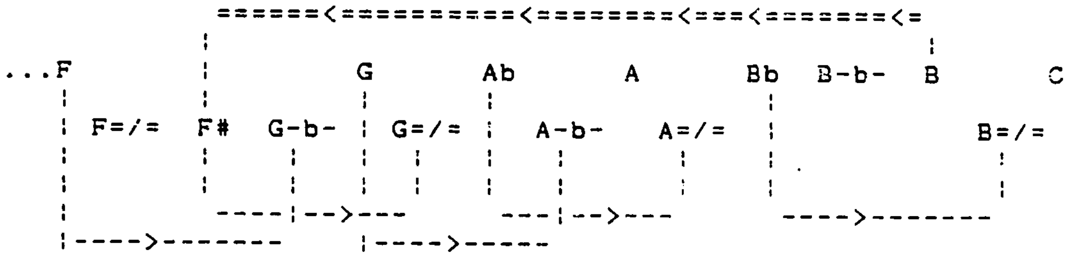
Note:

- The notes given in the first column are the standard translations of the Arabic/Persian note names indicated in the Congress publication (p.602). D'Erlanger presents this same scale as beginning on GG instead of C. He does this for the sake of comparing this scale with others which start on GG.
- The string length figures are those indicated in the Congress publication.
- The cents figures are those indicated by D'Erlanger.
- The two "extra" notes, higher versions of Eb and Ab, are those needed for maqam Hijaz (Recueil 1934:601). Although this point is not explained, these extra notes must be the minor second of maqam Hijaz on D and G, respectively.

A Diagram Showing the Egyptian Subcommittee's Method for Deriving the General Scale (The 11 tuned notes are on the upper plane in each half of the diagram; the 13 derived notes are on the lower plane. The eleven derivations which were based on the interval of 149 cents are designated by lines of dashes; the derivation based on the 199 cent interval is designated by a solid line; the derivation based on the 502.3 cent interval is designated by the dashed double line. The arrows indicate the direction of the derivation:



(diagram continued:)



APPENDIX 6

THE INTONATION THEORIES OF TAWFĪQ AL-ṢABBĀGH
(see Chapter IV, Section A.3)

In order to prove the fallacy of the quarter-tone system (and the veracity of his own system of commas), al-Sabbagh focuses on the intervals, Dukah to Sikah and Sikah to Jaharkah, i.e., D to E-b- and E-b- to F. While the quarter-tone system assumes these two intervals to be equal in size (three *arbā‘* each), al-Sabbagh holds that Dukah to Sikah is a larger interval (6 3/4 or 7 commas) than Sikah to Jaharkah (6 1/4 or 6 commas), this being irrespective of the maqamat they appear in. By means of proof, he transposes maqam Bayyati (the first three notes of which are D E-b- F) to E-b- without retuning any of the notes. "But we find [the interval E-b- to F] to be too little and we are obliged to raise [the F] a little [one comma] in order to [correctly] articulate maqam Bayyati [from E-b-]. This proves that the interval between [E-b- and F] is less than the interval which is between [D and E-b-]" (1950:33).

As a second example, he transposes maqam Sikah (E-b- F G ...) to D, again without retuning any of the notes. When maqam Sikah is started from D, "we find that [the second note, E-b-] is higher than what is asked for. This also proves the smallness of the interval existing between the two notes, [E-b- and F], in comparison with the interval existing between the notes, [D and E-b-]" (ibid.).

As a last example, al-Sabbagh transposes Rast (C D E-b- ...) to E-b-. He states that in its root position the interval from the tonic, C, to E-b- is 9 + 7 or 16 commas. But when transposed to E-b-, the interval from the tonic to the third note is now only 6 + 9 or 15 commas. "We find it to be deficient and we are compelled to raise [the G] a little in order to gave maqam Rast from [E-b-]" (ibid.).

```
C          D          E-b-       F          G
|--- 9 ---|--- 7 ---|--- 6 ---|--- 9 ---|
```

al-Sabbagh's General Scale

At the end of his first book (1950:173) al-Sabbagh offers his own version of the Arab scale. His scale is empirically based in a number of respects. For one, it includes only those notes needed to form the main maqamat in root position; thus, al-Sabbagh comes up with a 18-note general scale (see table below) instead of the prevailing 24-note scale. Secondly, the names he assigns to many of the notes are not those traditionally used by theorists; rather they derive from the descriptive terminology used by many musicians. For example, he includes two varieties of the note Eb (Kurd) which he calls "the low Kurd" and the "high Kurd" (*Kurdī wāṭī* and *Kurdī `ālī*). (This is discussed further in Chapter IV.B.) Later, in a 1954 work, al-Sabbagh makes a number of changes in this scale. He explains these changes in the following passage:

> Later I became aware of the desire among many to preserve our common names for the 24 *arbā`*, so I proceeded to add six other notes ... and have preserved the names of the 24 *arbā`* used amongst us; thus there does not remain to anyone even the possibility for objection. So my "current Arabic scale" has come to consist of 25 steps and 24 unequal intervals." (1954:46)

Obviously then, al-Sabbagh's audience was not ready to abandon the by-now traditional note names; on his part, though, al-Sabbagh was not ready to abandon his unequal intervals.

al-Sabbagh's scale has much in common with the scale of `Ali Darwish (see D'Erlanger 1949:28-30). `Ali Darwish divided the five whole steps per octave (each whole tone contains 9 commas) into five parts, recognizing notes at the following comma intervals: the 2nd, the 4th, the 5th, the 7th, and the 9th (i.e., 2 + 2 + 1 + 2 + 2). The two half steps per octave (each containing 4 commas) were divided into two parts, with notes at the 2nd and 4th comma intervals. This created an octave with 29 notes. (D'Erlanger gives an extra unexplained note thereby making the total 30.) al-Sabbagh based his scale on a 4 + 1 + 2 + 2 division of the whole tone, ignoring `Ali Darwish's first two-comma interval. (`Ali Darwish used this interval for the half-sharps.)

In both theories, the fourth and fifth commas in each whole step are initially described as providing separate positions for the sharps and flats (see D'Erlanger 1949:30 and al-Sabbagh 1950:37). al-Sabbagh mistakenly assigns the sharp to the fourth comma position and the flat to the fifth comma position; `Ali Darwish gives the reverse. As for the two remaining intervals, both theorists state that 7 commas (2 + 2 + 1 + 2 or 4 + 1 + 2) gives the half-flats while 9 commas gives the whole steps.

the whole step

	0	1	2	3	4	5	6	7	8	9
`A.Darwish:			-/-		b	#		-b-		=
al-Sabbagh:					#	b		-b-		=

When relating these note positions to the maqamat, however, both theorists tend to use the fourth and fifth comma positions to represent variant intonations for the selfsame notes (two varieties of Eb and Ab, for example). al-Sabbagh retains separate positions for the sharp and flat only for the notes F# and Gb. The final form of al-Sabbagh's scale can be presented as follows:

```
C                    D                       E       F                   G                   A                      B     c
    4   1   2   2        4   1   2   1   1       4       3   1   1   4       4   1   2   2       4   1   2   1   1      4
      ¦   ¦   ¦            ¦   ¦   ¦   ¦                   ¦   ¦   ¦           ¦   ¦   ¦           ¦   ¦   ¦   ¦
 Db-     Db¦          Eb-     Eb¦     E-              F#-     F#¦         Ab-     Ab¦         Bb-      Bb¦    B-
           D-b-                 E-b-                              Gb                A-b-                  B-b-
```

Note that this scale does not include the seven half-sharp notes, C=/=, D=/=, E=/=, G=/=, G=/=, A=/=, and B=/=. These would naturally occur two commas above the seven natural notes. al-Sabbagh did not consider these notes to be a part of the actual performance practice. By excluding these, al-Sabbagh has freed himself to provide two variants of 7 other notes without increasing the total number of pitches beyond the traditional 24. The notes with two variants are Db, Eb, E, F#, Ab, Bb, and B. In addition, by omitting the note G-b-, al-Sabbagh is able to give separate positions for F# and Gb, again without increasing the total number of pitches. (See Chapter IV.B for further discussion of these variant pitches.)

al-Sabbagh's Eighteen and Twenty-Four Tone General Scales

	18 tones	24 tones	intervals commas	pitches cents	freq. ratios
C	Kirdan	Kirdan		1200	2/1
			4		
B	nim Mahur 'ali	Mahur		1109.4	243/128
			1		
B-	nim Mahur wati	nim Mahur		1086.8	15/8
			1		
B-b-	Awj	Awj		1064.2	1200/651
			2		
Bb		'Ajam		1018.9	883/490
			1		
Bb(-)	'Ajam	nim 'Ajam		996.2	16/9
			4		
A	Husayni	Husayni		905.7	27/16
			2		
A-b-		tik Hisar		860.4	603/368
			2		
Ab	Hisar 'ali	Hisar		815.1	189/118
			1		
Ab-	Hisar wati	nim Hisar		792.5	128/81
			4		
G	Nawa	Nawa		701.9	3/2
			4		
Gb	Saba	tik Hijaz		611.3	729/512
			1		
F#	Hijaz	Hijaz		588.7	45/32
			1		
F#-		nim Hijaz		566.0	112/81
			3		
F	Jaharkah	Jaharkah		498.1	4/3
			4		
E	nim Busalik	Busalik		407.5	81/64
			1		
E-		nim Busalik		384.9	5/4
			1		
E-b-	Sikah	Sikah		362.3	102/83
			2		
Eb	Kurdi 'ali	Kurdi		317.0	6/5
			1		
Eb-	Kurdi wati	nim Kurdi		294.3	32/27
			4		
D	Dukah	Dukah		203.8	9/8
			2		
D-b-		tik Zirkulah		158.5	201/184
			2		
Db	Zirkulah	Zirkulah		113.2	16/15
			1		
Db-		nim Zirkulah		90.6	256/243
			4		
C	Rast	Rast		0	1/1

notes for the previous table:

- The 18-note scale is presented in al-Sabbagh's 1950 work (p.173); the 24-tone is given in the 1954 work (p.47).

- al-Sabbagh's scale has 53 commas per octave. Based on the calculation, 1200/53, the 4-comma intervals are determined to be 90.6 cents, the 3-comma intervals are 67.9 cents, the 2-comma intervals 45.3 cents, and the 1-comma intervals 22.6 cents.

- Besides indicating the comma values, al-Sabbagh also gives for each note in his scale (1) the ratio of the length of the stopped string to the length of the whole string; (2) the length of the speaking portion of the string in terms of a string length of 10000 parts, and (3) cycles-per-second values based on A = 435.

I have added the columns in the above table which give frequency ratios (freq. ratios) and cents values. The former is based on al-Sabbagh's "stopped string/whole string" ratios. These figures are helpful in recognizing the presence of both Pythagorean (256/243, 32/27, 81/64, etc.) and just (6/5, 5/4, etc.) intervals in al-Sabbagh's scale.

In calculating the cents values of the pitches, I have chosen to use only al-Sabbagh's "commas" column, as this is clearly the main method for deriving the intervals in his theories. The other three methods (see numbers 1, 2, and 3 above) play virtually no role in al-Sabbagh's explanations of his own theories. It must be pointed out, though, that the four methods would not yield the same values in terms of cents. For example, the note tik Zirkulah is said to have 563 cps compared to Rast's 516; this gives an interval of 150.91 cents. The speaking portion of the string is given as 9155 which gives a cent value of 152.84. The stopped string/whole string ratio is given as 17/201 which gives a cents value of 152.98. And the interval of 7 commas gives a cents value of 158.49. al-Sabbagh does not concern himself with these discrepancies; rather he labels the system of cents as "excessive" (1950:37).

APPENDIX 7

THE NUMBER OF MAQAMAT MENTIONED IN THE PUBLISHED SOURCES
(Organized by Number of Modes Included)

# of modes	name of author	date of public.	author's description of the modes included
119	D'Erlanger	1949	"the musical modes in favor today in the Arab countries of the Near East" (p.117) "modes chosen from among the best known of the musicians of the Arab countries of the Orient" (p.111). (See D'Erlanger 30 and Jargy 12 below).
108	al-Shawwa	1946	"all the current maqamat and a large number of neglected maqamat" (p.99).
95	Mashaqah	c.1840	"the alhān known in our time in Syria" (1899:726); "the alhan current in our time among the learned of Syria" (1899:932).
95	D'Erlanger & 'Ali Darwish	1933 & 1934	no comment; al-Hifni comments, "the largest number that it is possible to list of the maqamat used today in Arab countries" (1946:129). Three of these modes were rejected by a Congress committee.
93+	al-Sabbagh	1950	"the primary, secondary and technical anghām [aṣliyyah wa far`iyyah wa iṣṭilāḥiyyah]" (p.36). (+: plus other compound modes with compund names, the 2nd part of which are "Busalik" or "Kurd"; p.44 and 45).
92	Salah al-Din	1950	no comment (later gives lists of 62 & 48+5 maqamat; see below).
76(+)	Yusuf Shawqi	1964	seems to be "all the known musical maqamat" (1964:36). (+: plus transpositions of these modes to other degrees; p.26ff.)

72	Muhammad	1984	"the much-frequented and widespread [maqamat] in the Arab countries" (p.21).
62	Salah al-Din	1964	"all the maqamat known and current in Egypt" (1964:20). = a reduction from his previous list of 92.
61	Qasis	n.d.	"the most important *naghamāt* in Egypt now and the most widespread" (p.211; see p.191). 43 given separate presentations, 18 others mentioned w/in these presentations
53	*al-Halqah*; combining 1st & 2nd lists	1964	"excluding those which are not current in Egypt, however including similar and transposed maqamat [*munshābihah wa muṣawwarah*]" (1964:11).
52	Inst. of Oriental Music	1934	"all the maqamat used in Egypt" *Recueil* p.134); but al-Hifni comments, "all of these are not used in [Egyptian] melodies" (c.1946:129).
48(+)	Salah al-Din	1964	"all the musical maqamat in circulation in Egypt" (1964:23). (+: plus reference to 5 other modes) = a reduction from his other lists.
47	al-Khulaʿi	1904	"the structures composed upon in Egypt, old and new" plus "some structures not composed upon among us," also called "new structures" (p.41). 25 clearly in 1st category, 13 clearly in 2nd; it is unclear in which category the remaining 9 fall.
41	Kamil	1975	"we have chosen the widespread and well-known maqamat" (p.48).
40(+)	Touma	1977	he chooses to show these as examples; "there exist more than 70 [maqamat]" (p.32). Later he indicates that there are about 100 maqamat (p.40).

33	Spector	1970	"there are hundreds of maqamat, yet 32 of them are considered basic" (p.251). She adds a 33rd.
32	al-Hilu	1972	"the well-known and most used in all Arab and Turkish countries"(p.93).
30	D'Erlanger	1949	"hardly 30 are in common use"(p.111). less in "the practical music of 'cafe-concerts' and in popular songs" (p.111). (See D'Erlanger 119 above and Jargy 12 below)
26	Fahmi	1965	"the Arab maqamat used in Egypt" (p.56).
25	al-Khula`i	1904	"composed upon in Egypt, new and old" (p.41) (but see al-Khula`i above).
25(+)	`Arafah & `Ali	1978	"the maqamat used in Egypt" (p.23). List 25 but include 8 others in pieces of music they transcribe.
25(+)	Fatah Allah & Kamil	1982	"some of the widespread Arab scales" (p.13). List 25 but include 4 others in pieces they transcribe.
25(+)	Mash`al	n.d.	no comment. Lists 25 but later includes a 26th.
24	al-Hifni	c.1946	"the most important and the most widespread" (p.129).
24	al-Shawwa	1946	"some of the well-known and current maqamat" (p.144). See his 108 modes above.
24(+)	Qatr	n.d.	"some of the Arab maqamat" (p.15). Lists 24; mentions others in transcriptions.
22	Farah	1974	"the most important, most used, and easiest to understand" (p.83).
22(+)	Mahfuz	1964	"we picked 22"; there are more than 120 maqamat (p.258). Mentions 6 beyond the 22.
20-30	al-Shawwa	1946	"presently in circulation" in Egypt (p.4)

20(+)	Jabaqji	1976	scales of these 20 given throughout this `ūd method book. 14 others plus 10 transpositions are included in transcriptions.
17(+)	Villoteau	1826	"each of the modes known & practiced by Egyptian musicians" (p.128); but also, "the modes which the musicians seem to know the best" (p.127). 17 + 3 which have different names when played an octave higher.
17	al-Sabbagh	1950	"the primary angham" & "the secondary maqamat which have their own distinctive character" (aṣliyyah and far`iyyah) (p.53). Mentions 93 in all (see above).
14	Bulos	1971	"only 14 ... are employed by musicians nowadays" (p.9).
13	`Iffat	n.d.	"the principal maqamat used in abundance in the Arab countries" (p.26).
12	Racy	1983b	"maqamat most often used in Egypt and the Levant" (p.131).
12	Jargy	1971	taking exception to D'Erlanger's 30 "common" modes: "A dozen are, in fact, common" (p.61).
12	Mash`al	1979	12 modes used in exercises in this nāy method book; they are used in 4 transpositions.
8	Hafiz	1971	"the principal and current maqamat today" (p.183).
2-3	al-Shawwa	1946	"There have not been used in Egypt since 120-130 years more than 2-3 anghām" (p.4) (see comment above that now there are 20-30 in use in Egypt).

APPENDIX 8

NON-DUPLICATION AT THE OCTAVE; A SUMMARY

Being a summary of the modes which contain non-duplication at the octave in middle-period sources but which have simple octave duplication in the present-day period (see Chapter X, Section E).

1. modes which retain the same tonic note orientation at the octave, but change their tetrachordal affiliation

1.a. (4 + 1 + 4) + new 4 or (5 + 4) + new 4:

1.a.i. (4 + 1 + 4) + Nahawand or (5 + 4) + Nahawand (where the second tetrachord is Hijaz):

```
maqam Suznak:
                ¦ jins Rast  ¦    ¦ jins Hijaz¦
                C   D  E-b-  F    G Ab       B c   d eb   f    g
                                                ¦ jins Nah.¦
maqam Hijaz Kar:
                ¦ jins Hijaz ¦    ¦ jins Hijaz¦
                C Db        E F   G Ab       B c   d eb   f    g
                                                ¦ jins Nah.¦
maqam Shahnaz:
                ¦ jins Hijaz ¦    ¦ jins Hijaz¦
                D Eb       F# G   A Bb     c# d    e f   g
                                                ¦ jins Nah.¦

maqam Hisar:
                ¦    jins Hisar    ¦ jins Hijaz¦
                D    E F       G#  A Bb    c# d   e f    g
                                                ¦ jins Nah.¦
```

1.b. (4 + 4 + 1) + new 4:

1.b.i. (4 + 4 + 1) + Nahawand (where the second tetrachord is Nahawand):

```
maqam Bayyati:
            ¦jins Bayyati¦ jins Nah.¦
            D  E-b-  F    G   A Bb   c    d   e f   g
                                          ¦jins Nah.¦
maqam Hijaz:
            ¦ jins Hijaz ¦ jins Nah.¦
            D Eb      F#  G   A Bb   c    d   e f   g
                                          ¦jins Nah.¦
```

2. modes which, in the upper octave, shift their focus to a note other than the octave of the tonic:

2.a. 4 + 4 + 4 (or 5) (these modes begin the 2nd octave with a tetrachord based on the flat seventh):

2.a.i. (4 + 4) + Nahawand (where the second tetrachord is Hijaz):

maqam Shuri (Qarjighar):

```
    _____________  ____________
  ¦ jins Bayyati¦ jins Hijaz ¦
  D  E-b-   F   G Ab      B c   d eb   f   g
                         ¦jins Nahawand ¦
```

maqam Hijazi 'Ushayran:

```
    _____________  ____________
  ¦ jins Bayyati¦ jins Hijaz ¦
 AA  BB-b-  C   D Eb     F# G   A Bb   c   d
                         ¦ jins Nah.¦
```

2.a.ii. (4 + 4) + Nakriz/Nawa Athar (where the second tetrachord is Hijaz; this is a variation on the tendency to have the Hijaz tetrachord followed by a conjunct Nahawand tetrachord):

maqam Zawq-i-Tarab:

```
    ___________  __________
  ¦ jins Kurd  ¦jins Hijaz¦
  D Eb    F    G Ab    B c   d eb     f# g
                       ¦ jins Nakriz   ¦
```

maqam Huzam (really 3 + 4 + Nakriz/Nawa Athar):

```
   __________  ___________
  ¦jins Sikah ¦jins Hijaz ¦
  E-b-   F   G Ab     B c   d eb     f# g
                      ¦ jins Nakriz   ¦
```

2.a.iii. 4 + 4 + 4 (or 5) (where the second tetrachord is Nahawand):

maqam Kurd:

```
      _______________  ____________
     |  jins Kurd    | jins Nah.|
     D  Eb     F    G   A Bb     c   d  e-b-  f   g
                                 |____jins Rast___|
```

maqam Bayyati Sultani:

```
      _______________  ____________
     |jins Bayyati  |  jins Nah.|
     D  E-b-  F     G   A Bb     c   d  e-b-  f   g
                                 |__jins Rast_|
```

maqam Busalik `Ushayran:

```
      _______________  ____________
     |jins Bayyati  |  jins Nah.|
   AA  BB-b-  C    D     E F    G    A Bb    c   d
                                |__jins Nah._|
```

2.b. non-duplication resulting from overlapping tetrachords (Saba-like structures are discussed in Chapter X.C):

maqam Farah Faza:

```
     _____________
    |jins Nahawand|
  GG   AA  BBb   C   D Eb   F   G   A Bb   c   d eb   f   g
               |___jins `Ajam__|jins `Ajam|jins `Ajam|
```

maqam `Ajam:

```
     ____________
    |jins Bayyati|
    D  E-b-  F   G   A Bb   c   d eb   f   g   a bb
               |jins `Ajam|__jins `Ajam__|jins `Ajam|
```

2.c. non-dupl. in BB-b- and E-b- modes: 3 + 4 + 4 (or 5)

2.c.i. octave dupl. re. notes but not re. tetrachords:

maqam Rahat al-Arwah:

```
     ___________ _____________
    |jins Sikah|jins Hijaz  |
    BB-b-  C   D Eb      F# G   A  B-b-  c   d
                            |___jins Rast____|
```

maqam Sikah:

```
 ¦  Sikah  ¦ jins Rast  ¦
E-b-  F    G   A  B-b-  c    d   e-b-   f    g
                        ¦___jins Rast_______¦
```

maqam Huzam:

```
 ¦  Sikah  ¦ jins Hijaz ¦
E-b-  F    G Ab      B  c    d   e-b-   f    g
                        ¦___jins Rast_______¦
```

2.c.ii. non-duplication re. notes and tetrachords

maqam Rahat al-Arwah:

```
¦jins Sikah¦ jins Hijaz ¦
BB-b-  C   D Eb      F# G    A   Bb   c    d
                        ¦_jins Nahawand¦
```

maqam `Iraq:

```
¦jins Sikah¦jins Bayyati¦
BB-b-  C   D  E-b-   F  G    A Bb    c     d
                        ¦_jins Nahawand¦
```

maqam Huzam:

```
¦jins Sikah¦ jins Hijaz ¦
E-b-   F   G Ab       B c   d   eb    f    g
                        ¦_jins Nahawand¦
```

Recognizing Non-Duplication at the Octave

(a survey of sources from the middle and present-day periods)

authors >>>:	al-KHUL.	RAWDAT	D'ERL.	D'ERL.	INST.	FAHMI	SHAWWA	HILU	MAHFUZ	MAHDI	KAMIL	TOUMA	HIFNI	S.al-DIN	SABBAGH	HALQAH	QASlS	FARAH	MUHAMMAD	SURUR
date of work >>>: (i.e., 19__)	04	21	33	49	34	65	46	61	64	72	75	77	46	50	50	64	nd	74	84	86
Suznak (c d eb f)	^	^	/	/	/	/	/	/	^̲	.	.		.	.	.	.	.		.	.
Hijaz Kar (c d eb f)	^̲		/̲	/̲	/̲	/̲	^̲	^̲	^̲	^̲	.	.	^̲	.	^̲	.	.	/	.	.
Shuri(c d eb f)	.		^	^	^	^	^	.	^̲	.	.	^	.	.	.	.	.		.	.
Hisar (defg)	^		^	^			^	^				^		.	.	.			.	.
Shahnaz (defg)	^̲		/	/	/	/	/			.	.	/		.	.	.	.		.	.
Hijaz (defg)	.		^̲	^̲	.	.	^	^̲	.	.	.	^	.	.	.	.	.	^̲	.	.
Hijaz (d e-b- f g)	^		.	.	.	.	.	.	^	.	.	.	.		.	.	.	.	.	.
Kurd (Rast c)			^̲	.	\̲		.	.	\̲	.	.	.	.	.	.	.	.		.	.
Farah Faza(`Ajam BBb)			^	^	/	/	^	^̲			^			^̲	^̲	.	^̲		.	.
Bayyati (defg)	.		\	.	\̲	\	.	\̲	.	.	.	.	.	.	.	.	.	.	.	.
Sikah (c d eb f g)	.		.	.	.	.	.	.	.	.	.	.	.		.	.	.		.	.
Huzam (c d eb f g)			.	.	.	.	^̲	.	\̲	.	^̲	.	.	^̲	.	.	.	.	.	.
Huzam (c d eb f# g)			/	/	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
`Iraq (G A Bb c d)	.		\	\	\	\	.	.	\		^̲	\	.	.	\̲	.	.		.	.
R.al-Ar.(G A Bb c d)	^̲		\	\	\	\	\	\			^̲		.	.	.	.	.	\	.	.
Awj (G A Bb c d)			\̲	\̲	.		\̲				^̲			.	\̲		.		.	

.: non-duplication is not indicated.
/: non-duplication is indicated only in ascent.
/̲: non-duplication is indicated only in ascent but simple duplication is also indicated in ascent.
\: non-duplication is indicated only in descent.
\̲: non-duplication is indicated only in descent but simple duplication is also indicated in descent.
^: non-duplication is indicated in ascent and descent.
^̲: non-duplication is indicated in ascent and descent but simple duplication is also indicated.
: no mark at all means that the author does not mention the maqam.

note: al-Khula`i (1904) refers to the modes Hisar and Shahnaz only by saying that they are transpositions of Nawa Athar and Hijaz Kar, respectively (see notes 2 and 3 in Chapter X.E). Farah includes two Hijaz modes (1974:84 and 87): one, marked "simple," has duplication at the octave; the other, marked "with changes," has both duplication and non-duplication at the octave.

APPENDIX 9

MODAL SCALES ACCORDING TO PRESENT-DAY THEORY
(based on Muḥammad 1984 and Surūr 1986)

Key:
-b- = half-flat
=/= = half-sharp
GG = lower octave of G
c = upper octave of C

The two-octave fundamental scale is thus represented:
GG AA BB-b- C D E-b- F G A B-b- c d e-b- f g

Rāst Fasīlah

Rāst	C	D	E-b-	F		G		A	B-b-		c	
Sūzdilār	C	D	E-b-	F		G		A	Bb		c	
Sūznāk	C	D	E-b-	F		G	Ab			B	c	
Nīrz	C	D	E-b-	F		G	A-b-		Bb		c	
Māhūr	C	D	E-b-	F		G		A		B	c	
Dalanshīn	C	D	E-b-	F		G		A	B-b-		c	db . . .
Kirdān	Rāst w/ high focus											
Rahāwī	Rāst w/ low focus											
Zāwīl	combining Rāst and Nakrīz											
Sāzkār	C	D#	E-b-	F		G		A	B-b-		c	
Nishābūrk	D	E	F=/=	G		A	B-b-		c		d	
Yakāh	GG	AA	BB-b-	C		D		E	F=/=		G	
or	GG	AA	BB-b-	C		D	E-b-		F		G	

Nahāwand Fasilah

Nahāwand (Ḥijāzī)	C	D	Eb	F		G	Ab			B	c	
Nahāwand (Kurdī)	C	D	Eb	F		G	Ab		Bb		c	
Nahāwand Kabīr	C	D	Eb	F		G		A	Bb		c	
Nahāwand Muraṣṣa'	C	D	Eb	F	Gb			A	Bb		c	
Ṭarz Jadīd (see below)	C	D	Eb	F		G		A		B	c	
Būsalik	D	E	F	G		A	Bb		c		d	(w/C#)
'Ushāq Masrī	D	E	F	G		A	Bb		c		d	
or	D	E	F	G		A	B-b-		c		d	
Faraḥfazā	GG	AA	BBb	C		D	Eb		F		G	
Sulṭānī Yakāh	GG	AA	BBb	C		D	Eb			F#	G	

Nawa Athar Faṣīlah

Nawa Athar	C	D	Eb	F#	G	Ab			B	c
Nakrīz	C	D	Eb	F#	G		A	Bb		c
Basandīdah	C	D	Eb	F#	G		A	B-b-		c
Ḥiṣār	D	E	F	G#	A	Bb			c#	d

Bayyātī Faṣīlah

Bayyātī	D	E-b-	F	G		A	Bb		c	d
Ḥusaynī	D	E-b-	F	G		A	B-b-		c	d
Shūrī (Qārjighār)	D	E-b-	F	G	Ab			B	c	d
Bayyātayn	D	E-b-	F	G	A-b-		Bb		c	d
Muḥayyar	Bayyātī w/ high focus									
Ḥusaynī 'Ushayrān	AA	BB-b-	C	D		E-b-	F		G	A

Ṣabā Faṣīlah

Ṣabā	D	E-b-		F	Gb	A	Bb	c	db	(e f)
Ṣabā Zamzamah	D	Eb		F	Gb	A	Bb	c	db	(e f)
Ṣabā Būsalik	D		E	F	Gb	A	Bb	c	db	(e f)

Ḥijāz Faṣīlah

Ḥijāz ('Ajamī)	D	Eb	F#	G		A	Bb		c	d	
Ḥijāz (Awjī)	D	Eb	F#	G		A	B-b-		c	d	
Ḥijāz Gharīb	D	Eb+	F#-	G		A	Bb		c	d	?
Shahnāz	D	Eb	F#	G		A	Bb		c#	d	
Ḥijāzayn	D	Eb	F#	G	Ab			B	c	d	
Ḥijāz Kār	C	Db	E	F		G	Ab		B	c	
Zingarān	C	Db	E	F		G		A	Bb	c	
Sūzdil	AA	BBb	C	D		E	F		G#	A	
Shadd 'Arabān	GG	AAb	BB	C		D	Eb		F#	G	
Jahārkāh Turkī	F	Gb	A	Bb		c	db		e	f	

Kurd Faṣīlah

Kurd	D Eb F G A Bb c d
Shahnāz Kurdī	D Eb F G A Bb c# d
Athar Kurd	D Eb F G# A Bb c# d
Ḥijāz Kār Kurd	C Db Eb F G Ab Bb c
Ṭarz Nuwīn	C Db Eb F Gb A Bb c (db e f)
Shawq Ṭarab	AA BBb C D Eb F G A
	w/ D E-b- F Gb A

Sīkāh Faṣīlah

Sīkāh	E-b- F G A B-b- c d e-b-
Huzām	E-b- F G Ab B c d e-b-
Sīkāh Māyah(Shā`ar)	E-b- F G A Bb c d e-b-
Musta`ār	E-b- F# G A Bb c d e-b-
Ramal	E-b- F Gb A Bb c d e-b-
Rāḥat al-Arwāḥ	BB-b- C D Eb F# G A B-b-
`Irāq	BB-b- C D E-b- F G A B-b-
Bastanikār	BB-b- C D E-b- F Gb A Bb ...
Awj	`Iraq with high focus?

`Ajam Faṣīlah

`Ajam `Ushayrān	BBb C D Eb F G A Bb
Shawq Afzā	BBb C D Eb F Gb A Bb ...
`Ajam Muraṣṣa`	BBb C D E-b- F G A Bb
Ṭarz Jadīd (see above)	BBb C D Eb F# G A Bb
Jahārkāh	F G A Bb c d e-b- f

REFERENCES

Allah Wayrdī (Allawīrdī), Mīkhā'īl
1949 Falsafat al-Mūsīqá al-Sharqiyyah [The philosophy of Eastern music]. Damascus: Ibn Zaydūn. 1st publ. 1948.

Antonius, George
1955 The Arab Awakening. London: Hamish Hamilton. 1st published 1938.

al-Anṭūnī, Father Būlis al-Ashqar
1925 Mabādī' Mūsīqá Sharqiyyah wa Gharbiyyah [Fundamentals of Eastern and Western music]. Beirut: n.p.

'Arafah, 'Abd al-Mun'im
1976 Kitāb Ustādh al-Mūsīqá al-'Arabiyyah [The book of the Arab music teacher]. 3rd ed. (1st ed. 1944) Cairo: Maṭba'at al-Sa'ādah.

'Arafah, 'Abd al-Mun'im and Ṣafar 'Alī
1984 Dirāsat al-'Ūd [The study of the 'ūd]. 6th ed./printing ([sic] 1978 issue was also called 6th ed./printing) (1st ed. 1942). Cairo: Maṭba'ah al-Sa'ādah.

Arian ('Aryān), Émile
1924 "Preuve Irréfutable de la Division de l'Échelle Musical Orientale en 24 Quarts de Tons," in Bulletin de l'Institute d'Egypte. Cairo: Imprimerie de l'Institut Francais d'Archéologie Orientale, (6):159-167.

al-'Aṭṭār, Muḥammad (1764-1828)
c.1820 Rannat al-Awtār fī Jadāwil al-Afkār fī Fann al Mūsīkār [The sounds of strings (arranged) in rubrics to bring to mind what concerns the musician's art]. My source for information on this work is Shiloah's The Theory of Music, 1979:65-66. al-'Aṭṭār was one of Mashāqah's teachers.

Berner, Alfred
1937 Studien zur arabischen Musik auf Grund der gegenwärtigen Theorie und Praxis in Ägypten. Leipzig: Fr. Kistner & C.F.W. Siegel.

Berque, Jacques
1972 Egypt: Imperialism and Revolution. Translated by Jean Stewart. London: Faber and Faber.

Bulos, Afif Alvarez
1971 *Handbook of Arabic Music*. Beirut: Librairie du Liban.

Carmi-Cohen, Dalia
1964 "An Investigation into the Tonal Structure of the Maqamat," in *Journal of the International Folk Music Council*. 16:102-106.

Collangettes, S.J.
1904 & 1906 "Étude sur la Musique Arabe," in *Journal Asiatique*. Nov.-Dec. 1904:365-422; July-August 1906:149-190.

al-Dāqūqī, Ibrahīm
1965 *al-Mustadrak 'alá Kitāb al-Iṣṭilāḥāt al-Mūsīqiyyah* [Supplement to the "Book of musical terms"]. This is a supplement to an Arabic translation of a Turkish music dictionary. Baghdad: Maṭba'at Dār al-Jumhūriyyah.

Davis, Ruth
1986 *Modern Trends in the Ma'lūf of Tunisia, 1934-1984.* Ph.D. dissertation. Princeton Univ.

Dhākir, Muḥammad
1895 *Ḥayāt al-Insān fī Tardīd al-Alḥān* [The life of man in the repetition of melodies]. Cairo. My source for information on this work is al-Khula'ī (1904:33) and Shawqī (1969).

1903 *Tuḥfat al-Maw'ūd fī Ta'līm al-'Ūd* [The promised work on teaching the *'ud*]. Cairo. My source for information on this work is Īzīs Fataḥ Allah's 1971 dissertation.

Elsner, Jürgen
1973 *Der Begriff des maqām in Ägypten in neuerer Zeit*. Leipzeg: VEB Deutscher Verlag Für Musik.

1981 "*Maqām* und Modus." in *Report of the Twelfth Congress, Berkeley 1977*. ed. Daniel Heartz and B. Wade. Basel: Barenreiter Kassel.

D'Erlanger, Baron Rodolphe (1872-1932)

1933 & 1934 "al-Maqāmāt al-Muqaddamah min Janāb al-Bārūn Dī Arlanjar" [The maqāmāt presented by the Honorable Baron D'Erlanger]. This report, submitted by D'Erlanger to the 1932 Cairo congress on Arab Music, is contained in the two Congress publications: Kitāb al-Mu'tamar... (1933:182-329) and Recueil... (1934:187ff.). See Kitāb al-Mu'tamar... and Recueil...

1949 & 1959 La Musique Arabe v. 5 (1949); v.6 (1959). Paris: Librairie Orientaliste Paul Geuthner.

Fahmi, Amin

1965 al-Mūsīqá al-`Arabiyyah [Arab music]. Cairo: Maṭābi` Sijjil al-`Arab.

Fākhūrī, Jūzaf

n.d. Ta`lim al-`Ūd Dūn Mu`allim [The study of the `ūd without a teacher]. Beirut: al-Maktabah al-Ḥadīthah li al-Ṭibā`ah wa al-Nashr.

Farah, George

1974 Mabādī' al-`Ulūm al-Mūsīqiyyah [Principles of the science of music]. 2nd ed. (1st ed. c.1954) Beirut: Dār Maktabat al-Hayāt.

n.d. Tamrīn wa Ma`zūfāt Mūsīqiyyah li-Ālāt al-`Ūd [Exercises and pieces of music for the `ud]. 3rd ed. (1st ed. c.1954) Beirut: Dar Maktabat al-Hayat. Farah was head of the Oriental Division of the National Music Institute, Beirut.

Farmer, Henry George

1929 A History of Arabian Music. London: Luzac & Company, Ltd.

1936 "Mūsīḳī," in Encyclopedia of Islam. ed. Houtsma et al. Leidan: E.J. Brill. p.749-755. an English version of a French article in Recueil 1934:642ff.

1938 "Mus̲h̲āḳa," in The Encyclopedia of Islam Supplement. Leiden: E.J. Brill. p.159-60. Similar articles appear in 1954 Grove's and 1980 New Grove under "Mushāqa."

1940 The Sources of Arabian Music. Hinrichsen Edition, Scotland. 2nd ed. 1965.

Farmer, Henry George (continued)
1943 *Saʿadyah Gaon on the Influence of Music*.
London: Arthur Probsthain.

1954 "Egyptian Music" and "Syrian Music," in
Grove's Dictionary of Music and Musicians. ed.
Eric Blom. London: MacMillan, (2):891-897 and
(8):251-258, respectively.

1957 "The Music of Islam," in *New Oxford History of
Music*. Vol. I: *Ancient and Oriental Music*. ed.
Egon Weliesz. London: Oxford University Press.
421-477.

al-Faruqi
1974 *The Nature of the Musical Art of Islamic Culture:
A Theoretical and Emprical Study of Arabian Music*.
Ph.D. diss. Syracuse University, New York.

1981 *An Annotated Glossary of Arabic Musical Terms*.
Westport, Connecticut: Greenwood Press.

Fataḥ Allah, ʿĪzīs
1971 *Naẓariyyāt al-Mūsīqá al-ʿArabiyyah wa Ṭuruq
Tadrīsihā* [The theories of Arab music and ways
to teach it]. Thesis presented at al-Maʿhad
al-ʿĀlī li-al-Tarbiyyah al-Mūsīqiyyah, Cairo.

Fataḥ Allah, ʿĪzīs and Maḥmud Kāmil and Ghaṭās ʿAbd al-Mulk
1979 *Qawāʿid al-Mūsīqá al-ʿArabiyyah* [The rules of
Arab music]. Cairo: al-Ha'yah al-ʿĀmah li-Shuʿūn
al-Maṭābiʿ al-Amīriyyah.

Fataḥ Allah, Linda and Maḥmūd Kāmil
1982 *al-Manhaj al-Hadīth fī Dirāsat al-ʿŪd* [The new
method for the study of the *ʿud*]. 2nd printing.
Cairo: Maktabat al-Injlū al-Misriyya.

Fisher, Sidney Nettleton
1979 *The Middle East; a History*. 3rd ed.
New York: Alfred A. Knopf.

Gerson-Kiwi
1967 "Maqām," in *Riemann Musik Lexikon*. Mainz:
B.Schott's Sohne.

1970 "On the Technique of Arab Taqsim Composition," in
Musik als Gestalt und Erlebnis. Wien: Hermann
Bohlaus Nachf. pp.66-73.

Goldschmidt, Arthur Jr.
1979 *A Concise History of the Middle East.* Boulder, Colorado: Westview Press.

Greig, John Andrew
1987 *Tārīkh-i Saṅgīta: The Foundations of North Indian Music in the Sixteenth Century.* Ph.D. dissertation. UCLA.

Ḥāfiẓ, Muḥammad Maḥmūd Sāmī
1971 *Ta'rīkh al-Mūsīqá wa al-Ghinā' al-‘Arabī* [The history of Arab music and song]. Cairo: Maṭba‘at al-Fanniyyah al-Ḥadīthah.

al-Ḥalqah al-Thāniyah li Baḥth al-Mūsīqá al-‘Arabiyyah
1964 [The second study circle for research into Arab music]. Cairo: al-Majlis al-A‘lá li Ri‘āyah al-Funūn wal-Adab wal-‘Ulūm al-Ijtima‘īyyah (The Higher Council for the Patronage of the Arts, Literature and the Social Sciences).

Hashīm Bey
1862 *Majmū‘at al-Maqāmāt* [The collection of the maqamat]. Istanbul.

Hemsi, A.
1930 *La Musique Orientale en Egypte.* Alexandria: Edition Orientale de Musique. A series of articles previously published in two Egyptian French-language journals.

al-Ḥifnī, Maḥmūd Aḥmad (1886-1973)
1935- *al-Mūsīqá.* An Arabic music journal; renamed *al-Majallah al-Mūsīqiyyah* in 1936. ed. Maḥmūd al-Ḥifnī. Cairo. Published twice a month.

1946 *al-Mūsīqá al-Naẓariyyah* [Music theory]. 3rd edition. (1st publ. 1938; a 6th edition was publ. 1972.) Cairo: Maktabat al-Nahḍah.

al-Ḥilū, Salīm
1972 *al-Mūsīqá al-Naẓariyyah* [Music theory]. 2nd ed./printing. (1st publ. 1961) Beirut: Dar Maktabat al-Ḥayāt.

al-Hītamī
Majmū‘at al-Mūsīqá al-Ālātiyyah [Collection of instrumental music]. 7 vol.s. Cairo: American University in Cairo Press.

Hitti, Philip Khūrī
1951 *History of Syria, Including Lebanon and Palestine*. London: Macmillan.

Hourani, Albert
1970 *Arabic Thought in the Liberal Age 1798-1939*. London: Oxford University Press. 1st published 1962.

Ibn Dhurayl, 'Adnān
1969 *al-Mūsīqā́ fī Sūriyyah* [Music in Syria]. Damascus: Maṭābi' Alif Bā'.

Idelsohn, A.Z.
1913 "Die Maqamen der arabischen Musik," in *Sammelbande der Internationalen Musikgesellschaft*. (15):1-63. Also published in *Gesange der orientalischen Sefardim*. Jerusalem: Benjamin Harz Verlag. 1923.

'Iffat, Maḥmūd
n.d. *Uṣūl Dirāsat al-Nāy* [Fundamentals of studying the *nay*]. Cairo: Maṭba'at Nahḍah Misr. (c.1980).

Jabaqjī, 'Abd al-Raḥman
1976 *Kitāb Ta'līm al-'Ūd* [The book of *'ūd* instruction]. Aleppo: Dār al-Turāth al-Mūsīqiyyah.

1983 *al-Mawsū'ah al-Mūsīqiyah: Majmū'at al-Bashārif wa-al-Samā'iyyāt wa-al-Lūngh~~ay~~āt* [The music encyclopedia: collection of *bashrafs*, *samā'īs*, and *longās*]. Aleppo: Dār al-Turāth al-Musiqiyyah.

Jairazbhoy, Nazir A.
1971 *The Rags of North Indian Music*. Connecticut: Wesleyan Univ. Press.

Jargy, Simon
1971 *La Musique Arabe*. Paris: Presses Universitaires de France.

Jorgensen, Owen
1977 *Tuning the Historical Temperaments by Ear*. Marquette: The North Michigan University Press.

Kāmil, Maḥmūd
1975 *Tadhawwuq al-Mūsīqā́ al-'Arabiyyah* [Enjoying Arab music]. Cairo: Muḥammad al-Amīn.

Kāẓim, A.
1964 *al-Iṣṭilāḥāt al-Mūsīqiyyah* [Music terms]. Translated into Arabic from Turkish by Ibrahīm al-Dāqūqī. Baghdad: al-Jumhūriyah Press.

el-Kholy (al-Khulī), Samha
1978 *The Tradition of Improvisation in Arab Music*. Cairo: no publisher.

al-Khula'ī, M. Kāmil (1879?-1938)
1904 *Kitāb al-Mūsīqá al-Sharqī* [The book of Oriental music]. Cairo: Maṭba'ah al-Taqaddum (1322 H.) An alternative reading of the title is *Kitāb al-Mūsīqī al-Sharqī* [The book of the Oriental musician].

Kitāb Mu'tamar al-Mūsīqá al-'Arabiyyah [Book of the Arab
1933 music conference]. Cairo: al-Maṭba'ah al-Amīriyyah bi-al-Qāhirah.

al-Kurdī, 'Abdullah
1984 *Fann al-Irtijāl fī al-Mūsīqá al-'Arabiyyah* [The art of improvisation in Arab music]. Doctoral dissertation at Halwan University, Faculty of Music Education, Dept. of Arabic Music, Cairo.

Laborde, Jean Benjamin de (1734-1794)
1780 *Essai sur la Musique Ancienne et Moderne*. Vol.1. Paris: Imprimerie de Ph.-D. Pierres.

Lachmann, Robert and A.H. Fox-Strangways
1935 "Muhammedan Music," in *Grove's Dictionary of Music and Musicians*. ed. H.C. Colles. New York: The Macmillan Co. (3):575-579.

Land J.P.N.
1885 "Rescherches sur l'Histoire de la Gamme Arabe," in *Actes du 6ème Congrès International des Orientalistes*. Leide: E.J. Brill. (2):35-168.

Lane, Edward
1981 *An Account of the Manners and Customs of the Modern Egyptians*. The Haque: East-West Publications. Reprint of a 1895 edition. 1st publ. 1836.

el-Mahdi, Salah
1972 *La Musique Arabe*. Paris: Alphonse Leduc.

Maḥfūẓ, Fu'ād
1963-1964 *Kitāb Ta'līm al-Mūsīqá al-Sharqiyyah wa-al-Gharbiyyah li-Dirāsat Alāt al-'Ūd* [The book of instruction of Eastern and Western music for studying the instrument, the *'ud*]. Vol.3 & 4. Damascus: Maṭba'at al-Thabāt.

Marsot, Afaf Lutfi al-Sayyid (al-Sayyid-Marsot)
1977 *Egypt's Liberal Experiment: 1922-1936*. Berkeley: University of California Press.

1985 *A Short History of Modern Egypt*. Cambridge: Cambridge University Press.

Mash`al, `Abd al-Ḥamīd
1979 *Dirāsat al-Nāy bi-al-Tarīqah al-`Ilmiyyah* [Studying the *nay* by the scientific method]. Cairo: Matba`at Ra`d.

n.d. *al-Tafsīr al-`Ilmī li-Qawā`id al-Mūsīqá; Scientific interpetration to the roots and rules of Arab music*. c.1980 2nd ed. n.p.

n.d. *Dirāsat al-`Ūd* [Studying the *`ud*]. 3rd printing. Cairo. n.p.

Mashāqah, Mīkhā'īl ibn Jirjīs (1800-1888)
c.1840 *al-Risālah al-Shihābiyyah fī al-Ṣinā`ah al-Mūsīqiyyah* [The Shihābī treatise on the musical art]. Loosely translated into English in 1847 by Eli Smith (see Smith); published with Arabic commentary in 1899 by P.L. Ronzevalle; published along with a French translation, commentary, and introductory remarks by Ronzevalle in 1913 (see Ronzevalle).
Rouanet (1922:2681) dates this work as 1246 H., i.e., 1829-30 A.D. Farmer states (1938:160 and 1954 v.5:1012) that the oldest manuscript is dated 1840.

1955 *Muntakhabāt min "al-Jawāb `alá Iqtirāḥ al-Aḥbāb"* [Excepts from "Response to the suggestion of my dear ones"]. ed. A. Rustam and S. Abu Shaqra. Beirut: al-Jumhūriyyah al-Lubnāniyyah.
"Response..." was written in Damascus, c.1873.

al-Maṣrī, Khalīl and Aḥmad Shafīq Abū `Awf
1979 *al-Nuṣūṣ al-Kāmilah li-Jamī` al-Aghānī Kawkab al-Sharq Umm Kulthūm* [The complete texts of all the songs of "The star of the East," Umm Kulthum]. Cairo: Dār al-Ṭaba`ah al-Ḥadīthah

Muḥammad, Suhayr `Abd al-`Aẓīm
1984 *Ajandat al-Mūsīqá al-`Arabiyyah* [The notebook of Arab music]. Cairo: Dār al-Kutub al-Qawmiyyah.

al-Mūsīqá
1935- an Arabic music journal; renamed *al-Majallah al-Mūsīqiyyah* in 1936. ed. Maḥmūd al-Ḥifnī. Cairo. Published twice monthly.

Mustaphá, Ibrahīm
1887 "La Valeur des Intervalles dans la Musique Arabe," in *Bulletin de l'Institut Égyptien*. v.2 (8):247-259.

Naṣīr, Sāmī
1980 *Dirāsat al-Qānūn* [Studying the *qānūn*]. Part 1. Cairo: Tab' al-Kutub wa-al-Risā'il 'Ilmiyyah.

Nettl, Bruno
1974 "Thoughts on Improvisation: A Comparative Approach," in *The Musical Quarterly*. Vol.LX, (1):1-19.

Nettl, Bruno and Ronald Riddle
1973 "Taqsim Nahawand: A Study of Sixteen Performances by Jihad Racy," in *Yearbook of the International Folk Music Council*. (5):11-50.

Olsen, Paul Rovsing
1974 "Six Versions de Taqsim en Maqam Rast," in *Studia instrumentorum musicae popularis III*. ed. by Gustaf Hillestrom. Stockhom: Nordiska Musikforlaget NMS 6523.

Öztuna, Yilmaz
1969, 1974-76 *Türk Musikisi Ansiklopedisi*. 2 vol.s. (Vol.2 in 2 parts). Istanbul: Milli Eğitim Basimevi.

Pacholczyk, Josef
1980 "Arab Music," in *New Grove Dictionary of Music and Musicians*. ed. Stanley Sadie. London: Macmillan. (1):521-526.

Partch, Harry
1974 *Genesis of a Music*. 2nd ed. New York: Da Capo Press.

Powers, Harold
1980a "Mode," in *New Grove Dictionary of Music and Musicians*. ed. Stanley Sadie. London: Macmillan. (12):370-450.

1980b review of Owen Wright's *The Modal System of Arab and Persian Music. A.D. 1250-1300*. in *Journal of the American Musicological Society*. XXXIII. Spring (1):181-191.

Powers, Harold (continued)
1981 "Mode and Modality," in Report of the Twelfth Congress, Berkeley 1977. ed. by D. Heartz and B. Wade. London: The American Musicological Society.

Qasīs, Jūrj
n.d. Rā'id al-Mūsīqiyyīn [Musicians' guide]. Mansurah: Maṭba'at al-Nīl.

Qaṭr, Yusrī
1968 al-Kamān al-'Arabī [The Arab violin]. Book 2, pt.3. Cairo: n.p.

Qaṭr, Yusrī ('Abduh Qatr's son)
n.d. al-Fannān 'Abduh Qaṭr [The artist 'Abduh Qaṭr]. (1894-1971). Cairo: n.p. c. 1975.

Racy, Ali Jihad
1977 Musical Change and Commercial Recording in Egypt, 1904-1932. Ph.D. diss. Univ. of Illinois at Urbana-Champaign.

1981 "Music in Contemporary Cairo: A Comparative Overview," in Asian Music. Vol.13 1:4-26.

1982 "Musical Aesthetics in Present-Day Cairo," in Ethnomusicology. 26 (3):391-406.

1983a "Music in Nineteenth-Century Egypt: an Historical Sketch," in Selected Reports in Ethnomusicology. (4):157-179.

1983b "Music," in The Genius of Arab Civilization. 2nd ed. Cambridege: MIT Press. pp.121-141.

1983c "The Waṣlah: A Compund-Form Principle in Egyptian Music," in Arab Studies Quarterly 5 (4):396-403.

1988 "Sound and Society: The Takht Music of Early-Twentieth Century Cairo," in Selected Reports in Ethnomusicology. (7):139-170.

in press "Historical Worldviews of Early Ethnomusicologists: An East-West Encounter in Cairo, 1932." in Ethnomusicology and Modern Music History. ed. by Steve Blum et al. (Festschrift for Bruno Nettl.)

Rawḍat al-Balābil [The garden of the nightingales].
1920- -1927 ed. Iskandar Shalfūn(d.1932). Cairo. The first Arabic music journal. Published monthly.

Recueil des Travaux du Congrès de Musique Arabe.
1934 Cairo: Imprimerie Nationale, Boulac.

Reichow, Jan
1971 *Die Entfaltung eines Melodiemodells in Genus Sikāh*. Band LXI of Kölner Beiträge zur Musikforschung. Regensburg: Gustav Bosse Verlag.

Riḍā Bey, Muṣṭafá
1935 "Ḥawla al-Sullam al-Mūsīqī al-Ṭabī‘ī wa-al-Sullam al-Mu‘addal" [Concerning the natural musical scale and the tempered scale], in *al-Mūsīqá*. (2):5-6. (Riḍā was head of the Royal Institute for Arab Music, Cairo.)

Riḍā Bey, Muṣṭafá and Maḥmūd Aḥmad al-Ḥifnī
1934 *Dirāsat al-Qānūn* [The Study of the *qānūn*]. Cairo: Maṭba‘at Qārūṭ li al-Mūsīqá.

Ronzevalle, P.L.
1899 "*al-Risālah al-Shihābiyyah fī al-Ṣinā‘ah al-Mūsīqiyyah li-al-Duktūr Mīkhā'īl Mashāqah*" [The Shihābī treatise on the musical art by the Doctor Mīkhā'īl Mashāqah], in *al-Mashriq*, a bimonthly journal published under the direction of the fathers of the Universite St. Joseph, Beirut. Beirut: Imprimerie Catholique. Published in eleven installments all within 1899, starting on p.146. Contains Mashāqah's Arabic text with Arabic commentary by Ronzevalle.

1913 "Un Traité de Musique Arabe Moderne," in *Mélanges de la Faculté Orientale, Université Saint-Joseph, Beirut*. v.6:1-120. A critical edition of the Arabic text of Mashaqah's *al-Risalah al-Shihabiyyah* with French translation, commentary, and introductory remarks.

Rouanet, Jules
1922 "La Musique Arabe," in *Encyclopédie de la Musique et Dictionnaire du Conservatoire*. (1):2676-2812. ed. Albert Lavignac. Paris: Librairie Delagrave.

Russell, Alex. (d.1768) and Pat. Russell

1794 The Natural History of Aleppo. 2 vol.s. 2nd ed. London: G.G. and J. Robinson, Pater-Noster-Row. 1st ed. 1756.

al-Ṣabbāgh, Tawfīq

1950 al-Dalīl al-Mūsīqī al-‘Āmm fī Aṭrab al-Anghām [The general music manual on the most pleasing modes]. Syria: Maṭba‘at al-Iḥsān li-Maytam al-Rūm al-Kāthūlīk.

1954 al-Anghām al-Sharqiyyah [The Eastern modes]. Aleppo: Maṭba‘at al-Ma‘ārif. A 2nd edition of sections of his 1950 publication.

Ṣalāh al-Dīn, Muḥammad

c.1947 al-Būṣalah al-Mūsīqiyyah li-Taṣwīr al-Maqāmāt al-‘Arabiyyah [The musical compass for transposing the Arab maqamat]. Cairo: Maṭba‘at Kurrāsah.

c.1950 Taṣwīr al-Alḥān al-‘Arabiyyah [The transposition of the Arab modes]. n.d. 2nd ed./printing (1st published 1948.) Cairo: Maṭba‘ah Aḥmad Maḥīm.

1950 Miftāḥ al-Alḥān al-‘Arabiyyah [The key to Arab melodies]. Cairo: Maktab al-Handasah wa-al-Insha'āt li-al-Alāt al-Kātibah. 2nd printing. 1st published in 1946.

1960 Qawā‘id al-Mūsīqá al-‘Arabiyyah wa Tadhawwuquhā [The rules of Arab music and its enjoyment]. Cairo: al-Ha'yah al-‘Āmah li-Shu‘ūn al-Maṭābi‘ al-Amīriyyah.

1964 "al-Maqāmāt al-Mūsīqiyyah al-‘Arabiyyah: Tabsīṭuhā wa-Adillat Maqāmātihā" [The Arab musical maqamat: Their simplification and the key signatures of the maqāmāt], in al-Ḥalqah al-Thāniyah... (see above). pp.16-32.

Shalfūn, Iskandar (d.1932)

1920- -1927 Rawḍat al-Balābil [The garden of nightingales]. Cairo. The first Arabic music journal. Published monthly. Shalfūn was editor as well as a major contributor of articles.

Shaw, Stanford
1976 *The History of the Ottoman Empire and Modern Turkey*. v.1. Cambridge: Cambridge Univ. Press.

el-Shawan, Salwa
1979 "The Social-Political Context of al-Mūsīqá al-'Arabiyyah in Cairo, Egypt: Policies, Patronage, Institutions, and Musical Change (1927-77)," in *Asian Music* 12 (1):86-128.

1982 "The Role of Mediators in the Transmission of al-Mūsīḳá al-'Arabiyyah in Twentieth Century Cairo," in *Yearbook for Traditional Music* 14:55-74.

1984 "Traditional Arab Music Ensembles in Egypt since 1967: The Continuity of a Tradition in a Contemporary Framework," in *Ethnomusicology*. Vol.28 (2):271-288.

1985 "Western Music and its Practioners in Egypt (ca. 1825-1985): The Integration of a New Musical Tradition in a Changing Environment," in *Asian Music* 17 (1):143-153.

Shawqī, Yūsuf
1964 "al-Naẓariyyah al-Sullamiyyah li-al-Mūsīqá al-'Arabiyyah" [Scalar theory for Arab music], in *al-Halqah al-Thāniyah...* (see above). p.33-40.

1969 *Qiyās al-Sullam al-Mūsīqá al-'Arabī* [Measuring the Arab musical scale]. Cairo: Dār al-Kutub.

al-Shawwā, Sāmī (1887-1965?)
1946 *al-Qawā'id al-Fanniyyah fī al-Mūsīqá al-Sharqiyyah wa al-Gharbiyyah* [Artistic rules in Eastern and Western music]. Cairo: Maṭba'at Jibrā'il Fataḥ Allah Jabrī wa Waladuhu.

Shihāb al-Dīn (1795-1857)
1892 *Safīnat al-Mulk wa Nafīsat al-Fulk* [The royal ship and the sumptuous boat]. Lithographed ed. Cairo: Maṭba'at al-Jami'ah. Written c.1840; Shiloah (1979:328) documents a manuscript with this date. Kāmil (1975:25) says it was written in 1251 H.. i.e., 1835-36.

Shiloah, Amnon
1979 *The Theory of Music in Arabic Writings, (c.900-1900).* RISM B/X. München: G. Henle Verlag.

1981 "The Arabic Concept of Mode," in the *Journal of the American Musicological Society*. Vol.34 1:19-42.

Shurāh, Nabīl
1983 *al-Muqaddimah fī Ghinā' al-Alḥān al-'Arabiyyah* [Introduction to the singing of Arab melodies]. Cairo: Kulliyyat al-Tarbiyyah al-Mūsīqiyyah.

1984 "Imkāniyyāt al-Taḥwīl al-Naghamī li-Maqām al-Rāst" [The possibility of modal modulation for maqam Rast], in *Dirāsāt wa Buḥūth Jāmi'at Hilwan* (7):47-64.

Signell, Karl
1977 *Makam: Modal Practice in Turkish Art Music*. Seattle: Asian Music Publications.

Smith, Eli
1847 "A Treatise on Arab Music (chiefly from a work by Michail Meshakah, of Damascus)," in *Journal of the American Oriental Society*. Boston. Vol 1, 3:171-217. Loose translation of many parts of Mashaqah's treatise (see Mashaqah).

Spector, Johanna
1970 "Classical 'Ūd Music in Egypt with Special Reference to Maqāmāt," in *Ethnomusicology*. Vol.14 (2):243-257.

Surūr, Qadrī (Surour, Kadri)
1986 *al-Maqām fī al-Mūsīqá al-'Arabiyyah Qadīman wa Hadīthan fi Misr* [The maqam in ancient and modern Arab music in Egypt]. Doctoral dissertation for the Faculty of Music Education, Halwan University, Cairo.

Toderini
1789 *De la Litterature des Turcs*. Translated to French from the original Italian by Mr. l'Abbé de Cournand. Paris: Chez Poincot.

Touma, Habib Hassan

1971 "The Maqām Phenomenon: An Improvisation Technique in the Music of the Middle East," in Ethnomusicology. Vol.15 (1):38-48.

1975 Maqām Bayātī in the Arabian Taqsīm. International Monograph Publishers.

1977 La Musique Arabe. tr. Christine Hetier. Paris: Editions Buchet/Chastel.

Villoteau, G.A. (1759-1839)

1823 & 1826 Description de l'Égypte: État Moderne. v.13 (1823) & 14 (1826)., 2nd edition. Paris: Imprimerie de C.L.F. Panckoucke. 1st ed. 1812-13 (source: Farmer 1954:895).

Wehr, Hans

1976 A Dictionary of Modern Written Arabic. ed. by J. Milton Cowan. Ithaca, New York: Spoken Languages Services, Inc. 1st publ. in German in 1961.

Wright, Owen

1978 The Modal System of Arab and Persian Music, A.D. 1250-1300. London Oriental Series, Vol 28. Oxford: Oxford University Press.

1979 "Music," in The Legacy of Islam. 2nd edition. ed. Joseph Schnacht with C.E. Bosworth. Oxford: Oxford University Press.

1980 "Arab Music," in New Grove Dictionary of Music and Musicians. ed. Stanley Sadie. London: Macmillan. (1):514:521.

Yekta Bey, Rauf

1922 "La Musique Turque," in Encyclopédie de la Musique et Dictionnaire du Conservatoire. Part 1. ed. Albert Lavignac. Paris: Librairie Delagrave.